4336 Willick Road, Niagara Falls
Phase Two Environmental Site Assessment

Project Location:
4336 Willick Road
Niagara Falls, ON

Prepared For:
13071189 Canada Inc.
305-2585 Skymark Avenue
Mississauga, ON
L4W 4L5

NIAGARA SOILS SOLUTIONS LTD.

Prepared By:
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Date: February 25, 2025
NSSL File No.: NS2484-02

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

ACRONYMS AND ABBREVIATIONS

APECs	Areas of Potential Environmental Concern
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
COC	Contaminants of Concern
EC	Electrical Conductivity
ESA	Environmental Site Assessment
MECP	Ministry of the Environment, Conservation and Parks
MOECC	Ministry of the Environment and Climate Change
NPCA	Niagara Peninsula Conservation Authority
O. Reg.	Ontario Regulation
PAHs	Polycyclic Aromatic Hydrocarbons
PCA	Potentially Contaminating Activity
PHCs	Petroleum Hydrocarbons
SAR	Sodium Adsorption Ratio
SOPs	Standard Operating Procedures
SCS	Site Condition Standard
VOCs	Volatile Organic Compounds

1.0 EXECUTIVE SUMMARY

Niagara Soils Solutions Ltd. (NSSL) was retained by 13071189 Canada Inc. to conduct a Phase Two Environmental Site Assessment (ESA) of the vacant lot apart of 4336 Willick Road, in the City of Niagara Falls, ON (herein referred to as the "Phase Two Property" or the "Site"). The Phase Two ESA was recommended based upon the findings of the recently completed Phase One (NSSL September 2024) that documented the potential usage of pesticides, and a large personal garage with a potential aboveground storage tank (AST) onsite.

The key activities and outcomes of this Phase Two ESA included:

- Five environmental boreholes and four hand auger holes were advanced across the Site within the identified APECs.
- The boreholes were drilled to a maximum depth of about 8.2 m bgs within the subsurface reworked, and native material on-site.
- Three monitoring wells, MW-1 to MW-3 were installed into their respective boreholes.
- Target contaminants of concern for the soil and groundwater included Metals, Hydride forming Metals (As, Sb, Se), Petroleum Hydrocarbons (PHCs) F1 to F4, Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Polycyclic Aromatic Hydrocarbons (PAHs), Volatile organic compounds (VOCs), OCs (Organochlorine Pesticides), and Other Regulated Parameters: Boron Hot Water Soluble, (B-HWS), Cyanide (CN-), Chromium VI (Cr (VI)), Mercury (Hg), pH, Sodium Adsorption Ratio (SAR) and Electrical Conductivity (EC).
- Ten select soil samples were submitted for laboratory analysis.
- Groundwater samples were submitted per monitoring well for laboratory analysis.
- Initial soil results revealed exceedances to Metals and PHCs in BH1 and BH4. These exceeded results were delineated, whereupon the average concentrations met applicable Table 3 criteria.
- Groundwater results in MW2 and MW3 met Table 3 criteria. MW1 exhibited an elevated level of Metals (Cobalt). Subsequent purging of the well and submission of an additional Metals analysis revealed the standards were met.

Therefore, based upon the reported soil and groundwater results no further environmental work is required, and the findings herein may be utilized to support the filing of a Record of Site Condition with the Ministry of the Environment, Conservation and Parks.

2.0 INTRODUCTION

Niagara Soils Solutions Ltd. (NSSL) was retained by 13071189 Canada Inc. to conduct a Phase Two Environmental Site Assessment (ESA) of the vacant lot apart of 4336 Willick Road, in the City of Niagara Falls, ON (herein referred to as the "Phase Two Property" or the "Site"). The Phase Two ESA was recommended based upon the findings of the recently completed Phase One (NSSL September 2024) that documented the potential usage of pesticides, and a large personal garage with a potential aboveground storage tank (AST) onsite. The Phase Two ESA was completed in general accordance with Ontario Regulation 153/04, as amended, and has been supervised by a Qualified Person (QP_{ESA}).

2.1 Site Description

The Phase Two ESA covers approximately 2.5 of the 19.8 hectare of land associated with 4336 Willick Road that primarily consists of an agricultural field, a small woodlot, and a drainage ditch running north to south. The site is vacant with no structures on-site, with a concrete pad visible in the western portion of the site. Historically, the Site was utilized for agricultural and residential purposes dating back to at least 1934. Notably, from around 2000 to 2018, as depicted in aerial photographs, the owner utilized the detached garage and surrounding land to store and work on a variety of automobiles, trucks, etc. All structures were removed between 2021 and 2023. The property is situated at the southwest corner of Willick Road and Sodom Road, approximately 1 km south of the Welland River and 2.6 km southwest of the Niagara River. Willick Road runs east to west along the northern property boundary, while Sodom Road runs north to south at the eastern boundary of the Site. According to Niagara Navigator, the Phase One Property is classified as a "Farm without residence – with secondary structures (farm outbuildings)". The secondary structures have been removed, as observed by NSSL. Adjacent properties include a mix of residential properties, agricultural fields, vacant lots, and the Weaver Family Cemetery to the north.

2.2 Property Ownership

The Table 1 below provides the details of the property ownership.

Table 1: Property ownership

Owner:	13071189 Canada Inc. 305-2585 Skymark Avenue Mississauga, ON L4W 4L5
Authorization for Phase Two ESA:	Mr. Imran Ahmed

2.3 Current and Proposed Future Uses

The Site is currently a vacant lot found south of a residential suburb. The proposed future land use of the Site is understood to be for residential purposes.

2.4 Applicable Site Condition Standard

Under O. Reg. 153/04, as amended, the Ministry of the Environment, Conservation and Parks (MECP) has outlined Site Condition Standards (SCS) in the document "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" dated April 15, 2011. The following criteria and supporting rationale were utilized to determine the applicable SCS for the Phase Two ESA property.

Table 2: Site Condition Standards Applicable to the Phase Two Property

Property Use	The proposed future use is noted to be residential land use. Therefore, the SCS for Residential/Parkland/Institutional (R/P/I) land use was applied.
Grain Size	As per the Niagara Testing & Inspection (NTIL) report provided in Appendix D, the grain size analysis for selected samples was determined to be fine/medium-grained.
Water Wells	No domestic water wells were identified within 250 metres (m) of the Phase Two Property. The Site and surrounding properties are serviced by municipal water.
Within 30 m of a Waterbody	In accordance with O. Reg. 153/04, no land on the Phase Two Property is located within 30 m of a waterbody.
Depth to Bedrock	Based on the drilling activities, there is more than 2.0 m of soil between the ground surface and the top of the bedrock at the Site. Therefore, shallow soils are not applicable.
pH	The pH levels across the site were noted as above 5 and below 9.
Environmentally Sensitive Area	The Phase Two Property has not been identified within an environmentally sensitive area.
Area of Natural Significance	The Phase Two Property does not include land or is within 30 m of land that would be classified as an area of natural significance as defined by O. Reg. 153/04 as amended.

Therefore, based upon the above characteristics, it was determined that Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional (R/P/I) land use and fine-textured soils criteria should be utilized for the Phase Two ESA investigation.

3.0 BACKGROUND INFORMATION

3.1 Physical Setting

A review of the Ministry of Northern Development and Mines, Geology Ontario Spatial Search tool as well as "Quaternary Geology of Southern Ontario", Map 2496 and Map 2544, showing the "Bedrock Geology of Southern Ontario", indicated that the native overburden is glaciolacustrine deep water clay and silt, underlain by Upper Silurian Limestone, dolostone, shale, sandstone, gypsum and salt, which belongs to the Salina Formation. Based on a review of local well records, the depth of unconfined groundwater was recorded to range between 3.0 and 4.0 meters below ground surface (mbgs), and the confined aquifer was recorded at approximately 25 mbgs. The estimated depth to bedrock, as noted in the surrounding well records, is approximately 20 m bgs.

The Phase One Property land cover is characterized by mostly agricultural fields with a small section of gravel and reworked material within the northern part of the Site. As the Site is predominately covered by a permeable surface, overland flow would be limited. Any accumulation of surface water would be directed towards on-site intermittent swales and would flow northwards, off-site. The Site was noted to be relatively flat with a slight slope northward. The inferred local groundwater flow direction for the study area is northeast.

4.0 SCOPE OF THE INVESTIGATION

4.1 Overview of Site Investigation

The Phase Two ESA fieldwork occurred from November 22nd, 2024 to February 11th, 2025. The sampling and analysis plan (SAP) was designed to investigate the APECs identified in the Phase One ESA. The Phase Two ESA investigation at the Site encompassed the following key components:

- Underground service utility locates were conducted by Ontario One Call and a private locating service, Ontario Utility Locates.
- Five environmental boreholes and four hand auger holes were advanced across the Site within the identified APECs.
- The boreholes were drilled to a maximum depth of about 8.2 mbgs within the subsurface reworked, and native material on-site.
- Three environmental monitoring wells, MW-1 to MW-3 were installed into their respective boreholes.
- Target contaminants of concern for the soil and groundwater included Metals, Hydride forming Metals (As, Sb, Se), Petroleum Hydrocarbons (PHCs) F1 to F4, Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Polycyclic Aromatic Hydrocarbons (PAHs), Volatile organic compounds (VOCs), OCs (Organochlorine Pesticides), and Other Regulated Parameters; Boron Hot Water Soluble, (B-HWS), Cyanide (CN-), Chromium VI (Cr (VI)), Mercury (Hg), pH, Sodium Adsorption Ratio (SAR) and Electrical Conductivity (EC).
- Ten select soil samples were submitted for laboratory analysis.
- Groundwater samples were submitted per monitoring well for laboratory analysis.
- The Site survey was referenced to a local benchmark, noted as a manhole north of the Site and southeast of the intersection at Willick Road and Emerald Avenue.

4.2 Media Investigated

The Phase Two ESA involved the investigation of soil and groundwater media at the Site. No sediment sampling was considered necessary at the Site.

4.3 Deviation from Sampling and Analysis Plan

There were no deviations from the sampling and analysis plan.

4.4 Impediments

No impediments were encountered during field activities on-site.

5.0 INVESTIGATION METHOD

5.1 General

The Phase Two ESA was carried out in accordance with the Sampling and Analysis Plan and NSSL's Standard Operating Procedures (SOPs).

Groundwater monitoring wells were installed in accordance with the Ontario Water Resource Act, R.R.O. 1990, Ontario Regulation (O. Reg.) 903 – Amended to O. Reg. 128/03. The sampling and decontamination procedures were conducted in accordance with the "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario", May 1996, revised December 1996, as amended by O. Reg. 511/09.

Laboratory analytical methods, protocols, and procedures were carried out in accordance with the 'Protocol for Analytical Methods Use in the Assessment of Properties under Part XV.1 of the Environmental Protection Act", dated March 9, 2004, amended as of July 1, 2011, in accordance with O. Reg. 511/09 and O. Reg. 269/11.

5.2 Drilling

Prior to the commencement of the subsurface investigations, underground service utility locates were obtained for the Site through Ontario One Call. Additionally, a private underground service locating company, Ontario Utility Locates, located all potential on-site underground services (hydro, gas, water, sewer, and communications).

Five boreholes, BH1 to BH5, and four hand auger holes, HA-1 to HA-4, were advanced across the Site from November 22nd, 2024, by Elite Drilling utilizing a 150 mm solid stem auger. Boreholes were drilled to a maximum depth of 8.2 mbgs. The borehole locations are shown in Figure 5, and details depicted on borehole logs are in Appendix A.

5.3 Soil: Sampling

Thirty-six soil samples were collected from boreholes BH-1 to BH-5 and HA-1 to HA-4. Upon retrieval, the soil samples were logged for essential information such as soil type, moisture content, color, texture, and any visible evidence of impacts were recorded. Subsequently, the samples were stored for potential laboratory analyses and placed in clean coolers with ice to maintain their integrity. After field screening measurements were conducted, the chosen samples were transported and submitted to AGAT Laboratories Ltd. in strict adherence to Chain of Custody (COC) protocols for subsequent chemical analyses.

5.4 Field Screening Measurements

All soil samples were screened for combustible gases using an RKI Instrument, Eagle Portable Multi-gas detector (with Methane Elimination switch), operated in the methane elimination mode. The monitor has

a range of 0 to 50,000 parts per million (ppm) and an accuracy of ± 5%. The monitor was calibrated to hexane standards before field screening for both ppm and Lower Explosive Limit (LEL) in accordance with the calibration procedure outlined in the instrument's instructional manual. The instrument is regularly calibrated and tuned by the supplier, Pine Environmental. Each soil sample corresponding to a specific spoon depth was bagged for soil vapour analysis. Headspace vapour screening was conducted for all retrieved soil samples, with measurement readings of 0 ppm for the soils. Results for each sample are depicted in the borehole located in Appendix A.

5.5 Ground Water: Monitoring Well Installation

Three monitoring wells, MW-1 to MW-3, were installed into the corresponding boreholes to a maximum depth of approximately 7.6 mbgs. The monitoring wells were constructed to MOECC-recognized industry standards and consisted of a 50 mm (2-inch) diameter slotted PVC screen surrounded by a silica sand pack, attached beneath a solid 50 mm (2-inch) diameter PVC riser, surrounded by bentonite grout to ensure a seal between the ground surface and the water table. The wells were fitted with a monument metal protective casing. A waterra manual lift pump was installed into the well to allow purging and development and subsequent groundwater sample collection. The monitoring well locations are shown in Figure 5, and borehole logs are in Appendix A.

5.6 Ground Water: Field Measurement of Water Quality Parameters

Approximately one week after the installation of the monitoring well, the water levels were measured, and then the wells were purged until about three to five well casing volumes were removed. This process continued until the water level reading indicated that the condition in the purged well had stabilized. Groundwater observations were recorded for colour, clarity, the presence or absence of any free product/surface sheen, and any odours present during the purging of the wells. Following each measurement, the water level measuring device was cleaned using AlconoxTM soap solution wash/scrub, followed by a distilled water rinse. Purge water was contained and stored on-site in drums for future disposal.

5.7 Ground Water: Sampling

Groundwater sampling activities were conducted on December 5th, 2024, and February 11th, 2025. The activities were carried out using dedicated low-density polyethylene tubing and Spectra Field Pro Peristaltic Pump. Groundwater samples were collected into laboratory-supplied containers prepared with preservatives for the analysis. Disposable latex gloves were worn at each sample location. The groundwater samples were immediately placed into coolers packed with ice, pending delivery to the analytical laboratory.

5.8 Sediment: Sampling

There is no sediment at the Phase Two property.

5.9 Analytical Testing

The soil and groundwater sample analyses were completed by AGAT Laboratories Ltd., Glover Road, Stoney Creek, ON. AGAT is accredited by the Canadian Association for Laboratory Accreditation (CALA) in accordance with ISO/IEC 17025:1999 – "General Requirements for the Competence of Testing and Calibration Laboratories" for all the parameters analyzed during this investigation. This accreditation covers all the parameters that were analyzed during the investigation, ensuring the reliability and quality of the analytical results.

5.10 Residue Management Procedures

Soil material, purge water, and wash water generated during equipment cleaning were conscientiously contained and stored on-site in steel drums. These drums have been designated for future disposal in accordance with appropriate environmental and regulatory protocols.

5.11 Elevation Surveying

The elevation of the existing ground surface at the sample locations was referenced to a local benchmark, noted as the center of the manhole found north of the Site and southeast of the intersection at Willick Road and Emerald Avenue. The topographic contours of the Site, reflecting the varying elevations across the property, are visually represented in Figure 6.

5.12 Quality Assurance and Quality Control Measures

All activities undertaken as part of this Phase Two ESA were executed in strict accordance with the relevant and applicable regulatory requirements.

6.0 REVIEW AND EVALUATION

6.1 Geology

The Site featured an upper layer of sandy silt fill material across the western portion to a maximum depth of 0.84 m bgs. Debris of historical building materials related to the previously demolished personal garage were found within this layer. The upper soils across the Site were classified as reworked material, varying from clayey silt to silty clay, extending to a maximum depth of 1.45 mbgs. Traces of historical debris were also found in the reworked soils due to recent agricultural activities. Below the reworked layer, native soils consisted primarily of clayey silt and silty clay, with trace gravel and grey silt seams. These native soils were dry and stiff to very stiff. A transition from brown to grey soils was noted at approximately 7.16 mbgs, heralding the unconfined water table. Bedrock was not encountered during the field activities and is expected to be encountered at approximately 20 mbgs as per surrounding well records. Borehole locations are shown in Figure 5.

6.2 Ground Water: Elevations and Flow Direction

Before initiating groundwater sampling activities, measurements of groundwater depth were taken from each monitoring well. The recorded results are outlined below in Table 3. The measured groundwater levels provided information related to the level of unconfined groundwater across the Site.

Table 3: Groundwater Details

Monitoring Well ID	Well Elevation (BM in metres)	Screen Interval (meters bgs)	December 4th, 2024		December 5th, 2024	
			Groundwater Level (metres bgs)	Groundwater Elevation (metres)	Groundwater Level (metres bgs)	Groundwater Elevation (metres)
BH/MW-1	99.86	4.57 – 7.62	7.09	92.77	7.01	92.85
BH/MW-2	100.01	4.57 – 7.62	1.36	98.65	2.91	97.10
BH/MW-3	99.87	4.57 – 7.62	6.87	93.00	6.69	93.18

The groundwater depth variation observed at the Site, especially at MW-2, does not portray the actual depth at the Phase Two Property based on the borehole logs and the well records in the study area. The high water level at MW-2 could have been due to local factors, such as fill material, underground utilities/structures or wrong installation, that could affect the water level. Due to the uncertainty of the actual water level at MW-2, the groundwater flow direction within the unconfined aquifer could not be calculated; however, the inferred flow direction in the study area is northeast.

6.3 Ground Water: Hydraulic Gradients

The average horizontal groundwater hydraulic gradient was calculated to be 0.105, with minimum and maximum values of 0.013 and 0.170, respectively. Vertical hydraulic gradient was not calculated because only one aquifer was identified at the Site. The estimated average K-value across the site, excluding MW-2, ranges between 0.010 and 0.020.

Table 4: Hydraulic Gradient

Monitoring Well	Water Level Difference (m)	Monitoring Well Distance (m)	Hydraulic Gradient
MW1 – MW2	4.25	25	0.170
MW2 – MW3	3.92	30	0.131
MW3 – MW1	0.33	26	0.013

6.4 Fine-Medium Soil Texture

Grain size analysis conducted by NTIL on three specific samples revealed that 98.6 % (BH1-4), 94.9 % (BH2-8) and 94.4 % (BH4-2) of the soil matrices passed through the No. 200 sieve (Table 5), indicating a fine to medium grained soil texture. Fine-textured soil is characterized by containing more than 50 percent by mass of particles that are 75 micrometers or smaller in mean diameter. The detailed results can be found in Appendix D.

Table 5: Results of Grain Size Analysis

Sample ID	Sample #	Soil Sample Depth (m bgs)	Soil Type	Percent Passing - 75 µm (No. 200) Sieve
BH1	4	2.29 – 2.90	Clayey Silt / Silty Clay	98.6% - Fine/Medium
BH2	8	7.62 – 8.23	Clayey Silt / Silty Clay	94.9% - Fine/Medium
BH4	2	0.76 – 1.37	Clayey Silt / Silty Clay	94.4% - Fine/Medium

6.5 Soil Quality

Soil sampling was conducted on November 22nd, 2024. Thirty-six representative soil samples were obtained from the fill, reworked and native material based on the identified APECs. Soil samples were submitted to AGAT Laboratories Ltd. for analysis of Metals, As, Sb, Se, PHCs, BTEX, PAHs, VOCs, OCs, B-HWS, CN-, Cr (VI), Hg, and pH/SAR/EC. The soil results revealed exceedances to Metals (Cobalt) at BH1, and PHCs (F3) at BH4. The remaining soil results met the applicable criteria. Complete soil laboratory results are provided in Appendix B and displayed in Figure 8.

Table 6: Metals Soil Exceedance Results

Parameter	Reg 153/04 (2011)-Table 3 RPI	BH1-2
Cobalt	22 ug/g	**22.9**

Table 7: PHCs Soil Exceedance Results

Parameter	Reg 153/04 (2011)-Table 3 RPI	BH4-1
F3 (C16 to C34)	1300 ug/g	**1940**

6.6 Groundwater Quality

Three groundwater samples and one duplicate were collected on December 5th, 2024, from MW-1 to MW-3 and submitted for laboratory analysis for Metals, As, Sb, Se, PHCs, BTEX, PAHs, VOCs, CN-, Cr (VI), Hg,

and pH/EC. Groundwater results revealed an exceedance to Metals (Cobalt) at MW-1 as compared to Table 3 criteria. Following an additional purge and sampling event on February 11th, 2025, the groundwater at MW-1 was found to be in compliance with Table 3 standards. The remaining groundwater results from MW2 and MW3 met applicable criteria. Complete groundwater laboratory results are provided in Appendix D and displayed in Figure 9.

Table 8: Metals Groundwater Exceedance Results

Parameter	Reg 153/04 (2011)- Table 3 RPI	MW-1	MW-2	MW-3	DUP (MW-3)
December 5th, 2024					
Dissolved Cobalt	66 ug/L	**185**	0.64	1.61	2.06
February 11th, 2025					
Dissolved Cobalt	66 ug/L	23	N/A	N/A	N/A

N/A = Not Analyzed

6.7 Sediment Quality

No sediment was present at the Site.

6.8 Quality Assurance and Quality Control Results

All soil samples collected during the Phase Two ESA investigation were managed in strict adherence to the laboratory's analytical protocols, covering aspects such as holding time, preservation methods, storage conditions, and container specifications. A Certificate of Analysis has been obtained for each sample submitted for analysis, and these certificates are attached to this report. The overall quality of the field data gathered throughout this Phase Two ESA is deemed satisfactory, meeting the study's overarching objectives.

7.0 SOIL DELINEATION

NSSL observed that the soil exceedances were marginal compared to the applicable Table 3 criteria. These exceedances could be attributed to analytical error limits and may fall within the applicable criteria if the same samples were reanalyzed for the exceeded parameters. To confirm the possibilities stated above and determine whether averaging the samples would comply with the criteria outlined in Part IX, section 48, paragraph 2 of O. Reg. 153/04 (as amended), additional samples were collected from the same depths and within two meters of the original exceedance areas. These samples were then analyzed for the same parameters. The soil results for Cobalt were below detection limits and met the SCS, indicating that the initially exceeded concentrations were likely outliers and not related to onsite contaminating activities. The average concentrations of PHCs F3 across all samples met applicable Table 3 criteria as per O. Reg. 153/04, as amended. The tabulated results are presented below.

Table 9: Delineation Metals Results

Parameter	Reg 153/04 (2011)- Table 3 RPI	Depth (m bgs)	BH1-2	BH1-2A	BH1-2B	BH1-2C	BH1-2D	Average
Cobalt	22 ug/g	0.76-1.37	**22.9**	5.6	5.0	7.8	7.1	**9.7**

Delineation sampling date: December 4, 2024

Table 10: Delineation PHCs Results

Parameter	Reg 153/04 (2011)- Table 3 RPI	Depth (m bgs)	BH4-1	BH4-1A	BH4-1B	BH4-1C	BH4-1D	Average
F3 (C16 to C34)	1300 ug/g	0.76-1.37	**1940**	870	208	**2660**	126	**1161**

Delineation sampling date: December 4, 2024

8.0 CONCLUSIONS

In conclusion, Niagara Soils Solutions Ltd. was engaged by 13071189 Canada Inc. to carry out a Phase Two Environmental Site Assessment on the vacant lot apart of 4336 Willick Road, Niagara Falls, ON. The primary works and findings of this Phase Two ESA include:

- Five environmental boreholes and four hand auger holes were advanced across the Site within the identified APECs.
- The boreholes were drilled to a maximum depth of about 8.2 m bgs within the subsurface reworked, and native material on-site.
- Three monitoring wells, MW-1 to MW-3 were installed into their respective boreholes.
- Target contaminants of concern for the soil and groundwater included Metals, Hydride forming Metals (As, Sb, Se), Petroleum Hydrocarbons (PHCs) F1 to F4, Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Polycyclic Aromatic Hydrocarbons (PAHs), Volatile organic compounds (VOCs), OCs (Organochlorine Pesticides), and Other Regulated Parameters: Boron Hot Water Soluble, (B-HWS), Cyanide (CN-), Chromium VI (Cr (VI)), Mercury (Hg), pH, Sodium Adsorption Ratio (SAR) and Electrical Conductivity (EC).
- Ten select soil samples were submitted for laboratory analysis.
- Groundwater samples were submitted per monitoring well for laboratory analysis.
- Initial soil results revealed exceedances to Metals and PHCs in BH1 and BH4. These exceeded results were delineated, whereupon the average concentrations met applicable Table 3 criteria.
- Groundwater results in MW2 and MW3 met Table 3 criteria. MW1 exhibited an elevated level of Metals (Cobalt). Subsequent purging of the well and submission of an additional Metals analysis revealed the standards were met.

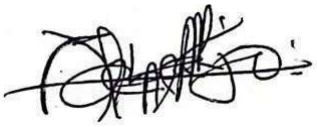
Therefore, based upon the reported soil and groundwater results no further environmental work is required, and the findings herein may be utilized to support the filing of a Record of Site Condition with the Ministry of the Environment, Conservation and Parks.

8.1 Signatures

This report was prepared by Damen Nyland, under the direction of Philip Adene.

Respectively submitted,
Niagara Soils Solutions Ltd.

Damen Nyland, BSC, GIT
Environmental Geologist



Philip Adene, P. Geo, QP_{ESA}
Professional Geoscientist

9.0 LIMITATIONS

Niagara Soils Solutions Ltd. prepared this Report for the account of 13071189 Canada Inc. and is intended to provide a Phase Two Environmental Site Assessment on the vacant lot apart of 4336 Willick Road, Niagara Falls, ON. The material in it reflects Niagara Soils Solutions Ltd.'s best judgement in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Should additional parties require reliance on this report, written authorization from NSSL will be required. With respect to third parties, NSSL has no liability or responsibility for losses of any kind whatsoever, including direct or consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

The investigation undertaken by NSSL with respect to this report and any conclusions or recommendations made in this report reflect NSSL's judgment based on the site conditions observed at the time of the Site inspection on the date(s) set out in this report and on information available at the time of preparation of this report. This report has been prepared for specific application to this Site and it is based, in part, upon visual observation of the Phase Two Property, subsurface investigation at discrete locations and depths, and specific analysis of specific chemical parameters and materials during a specific time interval, all as described in this report. Unless otherwise stated, the findings cannot be extended to previous or future Site conditions, portions of the Phase Two Property, which were unavailable for direct investigation, subsurface locations, which were not investigated directly, or chemical parameters, materials or analysis which were not addressed. Niagara Soils Solutions Ltd. has expressed professional judgement in gathering and analysing the information obtained and in the formulation of its conclusions.

NSSL makes no other representation whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in this report, including but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation and change. Such interpretations and regulatory changes should be reviewed with legal counsel.

Yours very truly,
Niagara Soils Solutions Ltd.

Jodie Glasier, H.BA., M.MM, EMA, EP
Founder & CEO

10.0 REFERENCES

The following resources were utilized as references:

- Ontario Division of Mines' "Paleozoic Geology of Southern Ontario, Map 2254".
- Ministry of Natural Resources' "Quaternary Geology, Niagara-Welland, Map P2496.
- Water Wells Ontario site.
- Ontario Oil, Gas, and Salt Resources Library
- Interactive Map – Niagara Navigator, https://navigator.niagararegion.ca/
- Ontario Base Mapping
- Niagara Peninsula Conservation Authority (NPCA) Watershed Explorer

FIGURES

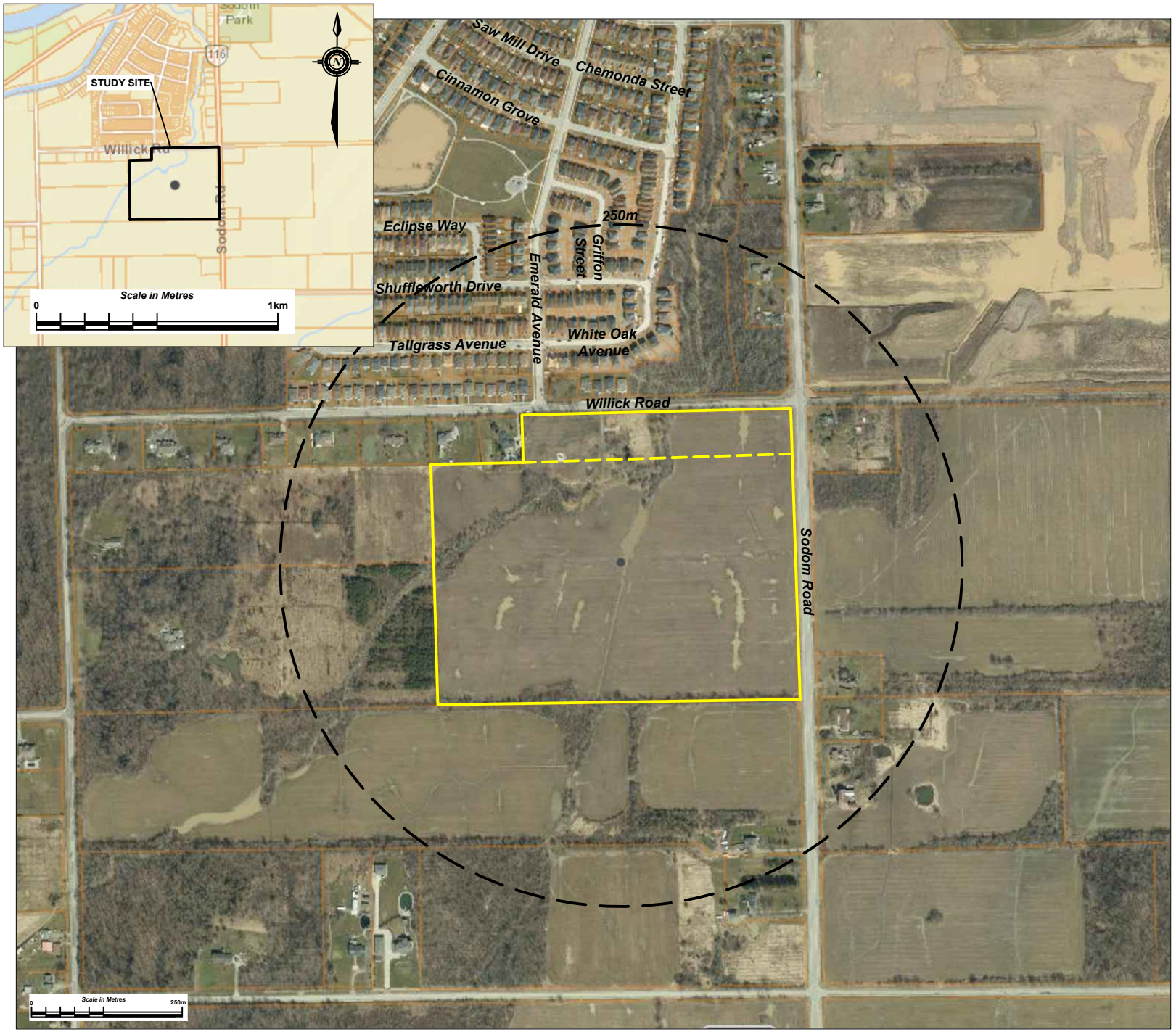
1. SITE LOCATION MAP
2. SITE LAYOUT & FEATURES
3. POTENTIALLY CONTAMINATING ACTIVITIES
4. AREAS OF POTENTIAL ENVIRONMENTAL CONCERN
5. BOREHOLE & MONITORING WELL LOCATION PLAN
6. TOPOGRAPHIC CONTOUR MAP
7. GROUNDWATER CONTOUR MAP
8. SOIL RESULTS

8B. DELINEATION SOIL RESULTS

9. GROUNDWATER RESULTS
10. CROSS SECTION PLAN VIEW; A-A', & B-B'

11A. CROSS SECTION AA'

11B. CROSS SECTION B-B'



N
W
E
S

LEGEND

- Property Boundary
- 250 m Study Area
- Site Limit/Extent of Work Line

NIAGARA SOILS SOLUTIONS LTD.

CLIENT:

13071189 CANADA INC.

PROJECT:

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
4336 WILLICK ROAD
NIAGARA FALLS, ON.

TITLE:

SITE LOCATION

DATE:	DECEMBER 2024		
PROJECT NO:	NS2484-02		
SCALE:	AS SHOWN		
DRAWN:	CN	REVIEWED: PA	
DATUM:	NAD 83	PROJECTION: 17T	

NO:

Figure 1

REFERENCE: BASE MAP PROVIDED BY NIAGARA NAVIGATOR, https://maps-beta.niagararegion.ca/Navigator/

REFERENCE: BASE MAP PROVIDED BY NIAGARA NAVIGATOR, https://maps-beta.niagararegion.ca/Navigator/

N
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LEGEND

- Property Boundary
- Site Limit/Extent of Work Line

NIAGARA SOILS SOLUTIONS LTD.

CLIENT:

13071189 CANADA INC.

PROJECT:

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
4336 WILLICK ROAD
NIAGARA FALLS, ON.

TITLE:

SITE LAYOUT & FEATURES

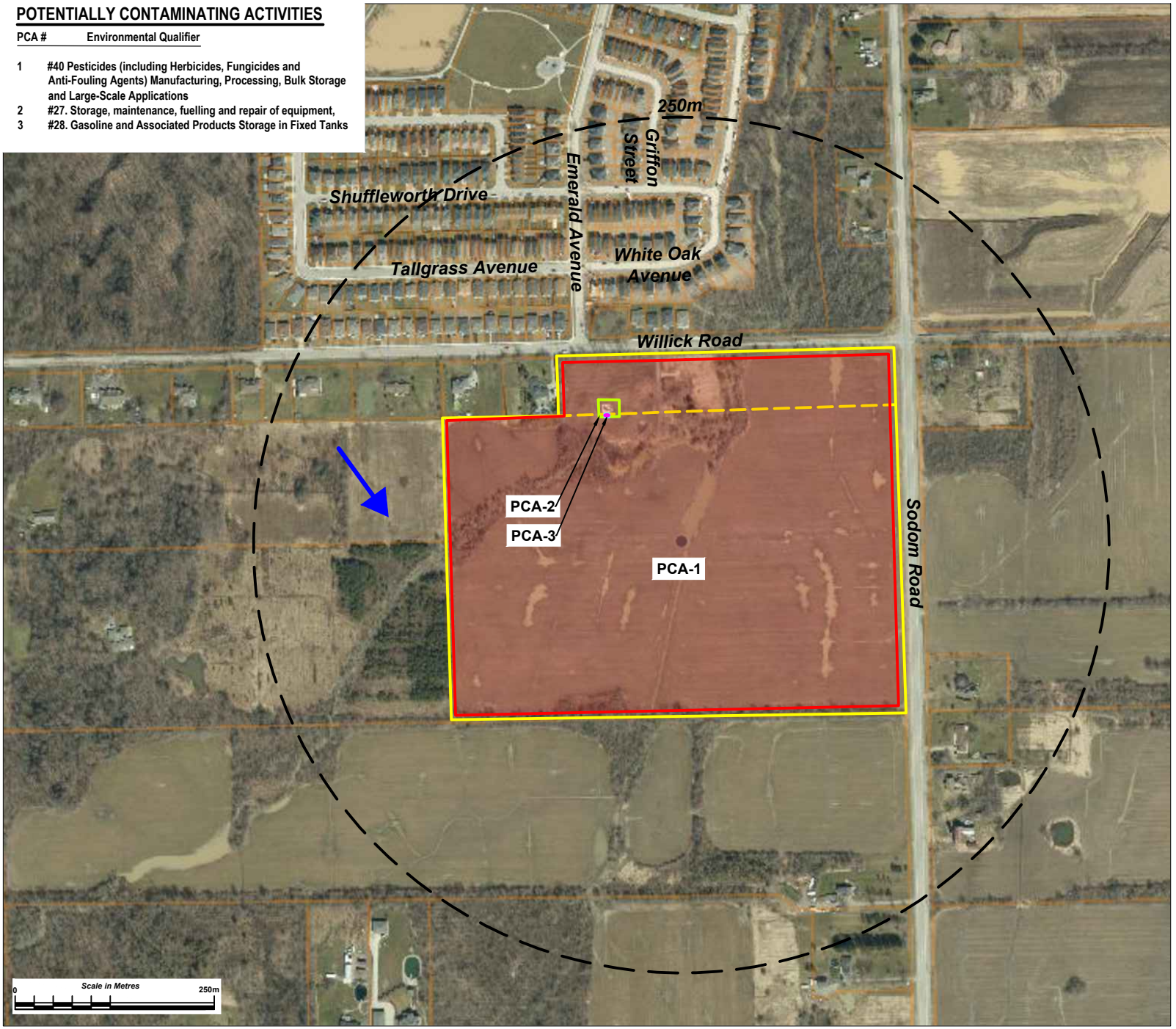
DATE:	DECEMBER 2024		
PROJECT NO:	NS2484-02		
SCALE:	AS SHOWN		
DRAWN:	CN	REVIEWED:	PA
DATUM:	NAD 83	PROJECTION:	17T

NO:

Figure 2

POTENTIALLY CONTAMINATING ACTIVITIES

PCA #	Environmental Qualifier
1	#40 Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications
2	#27. Storage, maintenance, fuelling and repair of equipment,
3	#28. Gasoline and Associated Products Storage in Fixed Tanks



REFERENCE: BASE MAP PROVIDED BY NIAGARA NAVIGATOR, https://maps-beta.niagararegion.ca/Navigator/

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LEGEND

- Property Boundary
- 250 m Study Area
- PCA not Generating APEC
- PCA Generating APEC
- Inferred Groundwater Flow Direction
- Aboveground Storage Tank
- Site Limit/Extent of Work Line

NIAGARA SOILS SOLUTIONS LTD.

CLIENT:
13071189 CANADA INC.

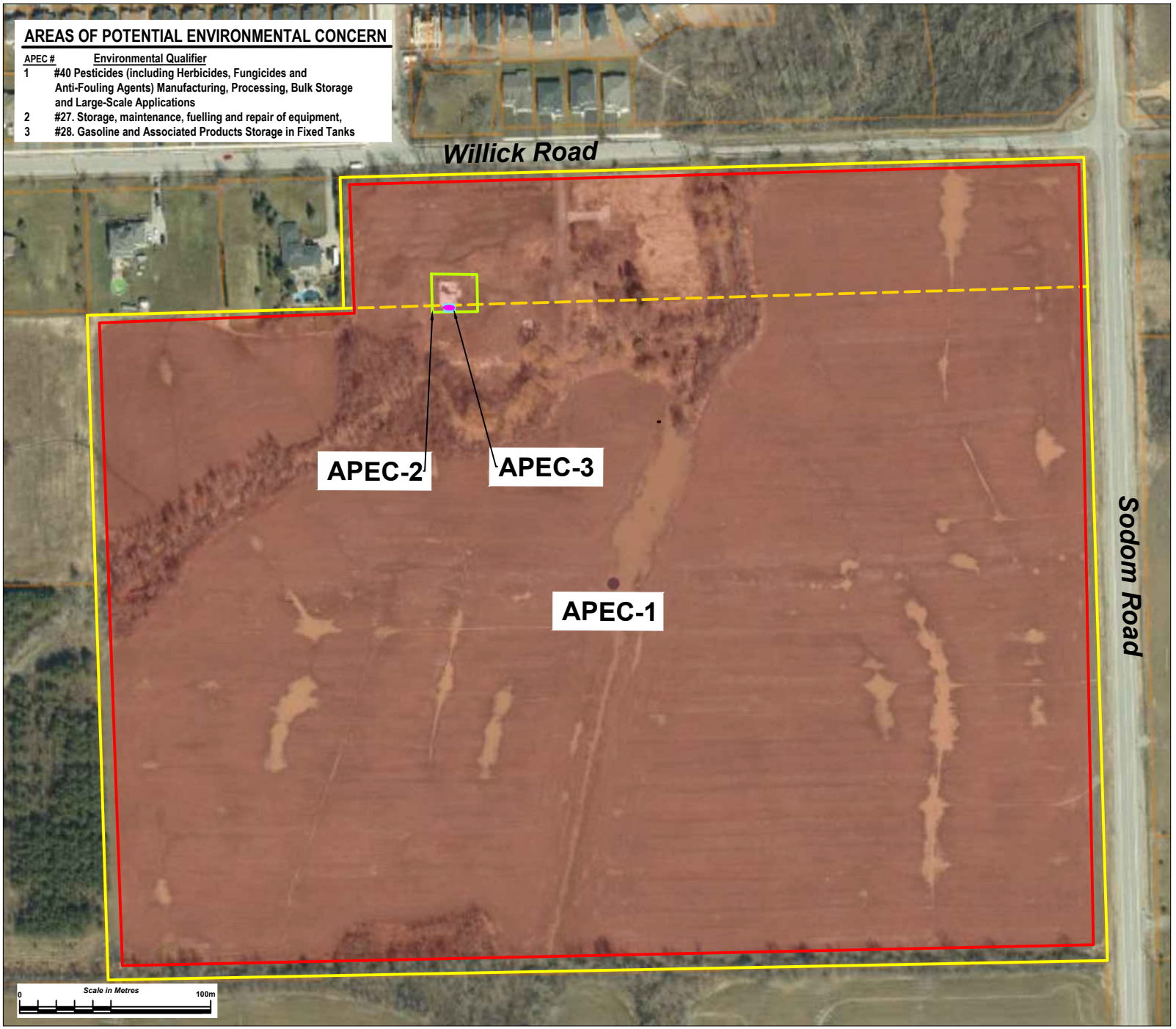
PROJECT:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
4336 WILLICK ROAD
NIAGARA FALLS, ON.

TITLE:
POTENTIALLY CONTAMINATING ACTIVITIES

DATE:	DECEMBER 2024		
PROJECT NO:	NS2484-02		
SCALE:	AS SHOWN		
DRAWN:	CN	REVIEWED:	PA
DATUM:	NAD 83	PROJECTION:	17T

NO:

Figure 3



REFERENCE: BASE MAP PROVIDED BY NIAGARA NAVIGATOR, https://maps-beta.niagararegion.ca/Navigator/

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LEGEND

- Property Boundary
- APEC
- Aboveground Storage Tank
- Site Limit/Extent of Development Area

NIAGARA SOILS SOLUTIONS LTD.

CLIENT:

13071189 CANADA INC.

PROJECT:

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
4336 WILLICK ROAD
NIAGARA FALLS, ON.

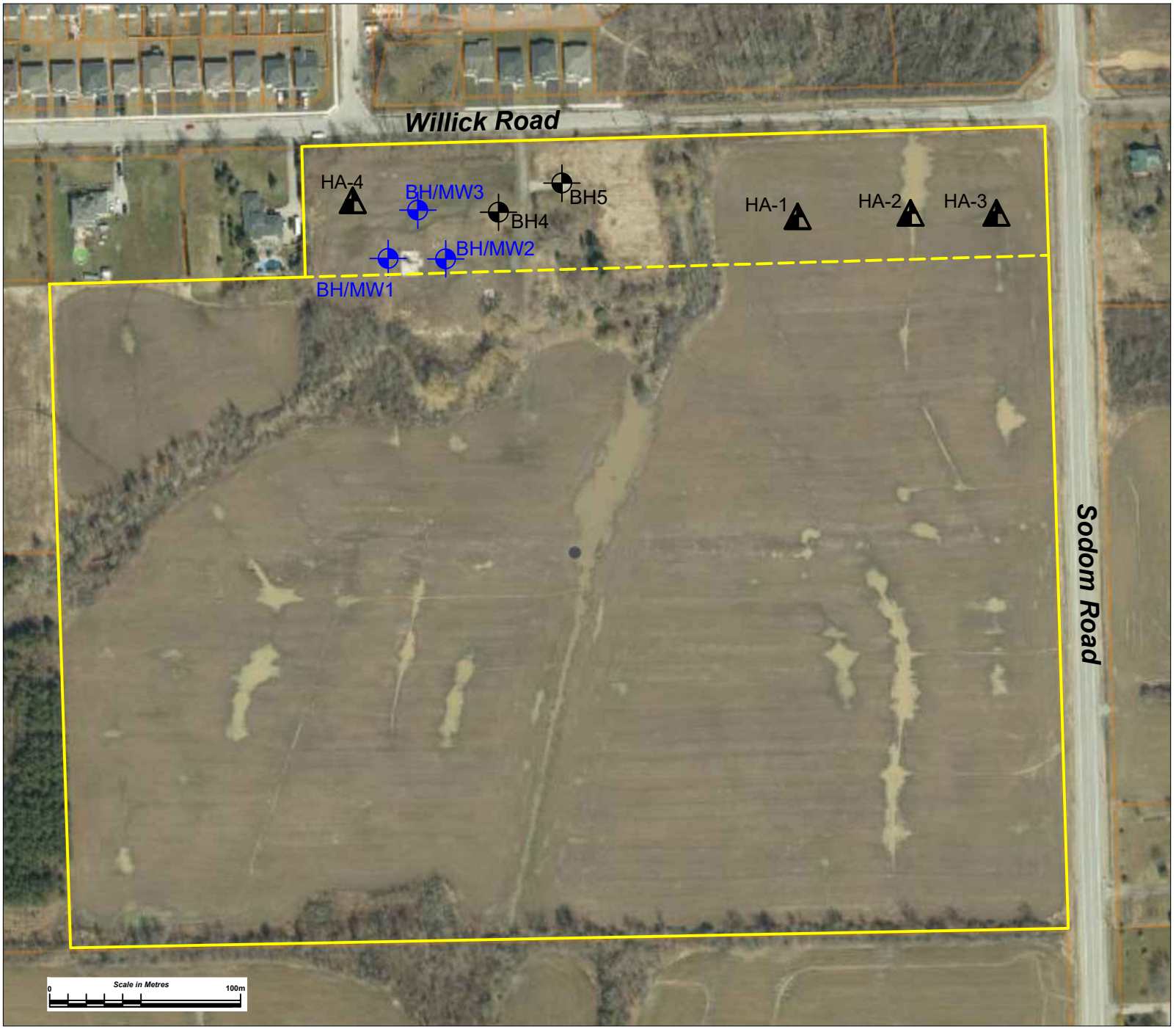
TITLE:

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

DATE:	DECEMBER 2024		
PROJECT NO:	NS2484-02		
SCALE:	AS SHOWN		
DRAWN:	CN	REVIEWED:	PA
DATUM:	NAD 83	PROJECTION:	17T

NO:

Figure 4



REFERENCE: BASE MAP PROVIDED BY NIAGARA NAVIGATOR, https://maps-beta.niagararegion.ca/Navigator/

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LEGEND

- Property Boundary
- BH/MW-1 — Borehole with Monitoring Well Location
- BH 1 — Borehole Location
- HA-1 — Hand Auger Location

NIAGARA SOILS SOLUTIONS LTD.

CLIENT:

13071189 CANADA INC.

PROJECT:

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
4336 WILLICK ROAD
NIAGARA FALLS, ON.

TITLE:

BOREHOLE & MONITORING WELL LOCATIONS

DATE:	DECEMBER 2024
PROJECT NO:	NS2484-02
SCALE:	AS SHOWN
DRAWN: CN	REVIEWED: PA
DATUM: NAD 83	PROJECTION: 17T

NO:

Figure 5

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LEGEND

- Property Boundary
- Borehole with Monitoring Well Location (BH/MW-1)
- Borehole Location (BH 1)
- Hand Auger Location (HA-1)
- Topographic Contours
- Site Limit/Extent of Work Line

NIAGARA SOILS SOLUTIONS LTD.

CLIENT:

13071189 CANADA INC.

PROJECT:

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
4336 WILLICK ROAD
NIAGARA FALLS, ON.

TITLE:

TOPOGRAPHIC CONTOURS

DATE:	DECEMBER 2024
PROJECT NO:	NS2484-02
SCALE:	AS SHOWN
DRAWN: CN	REVIEWED: PA
DATUM: NAD 83	PROJECTION: 17T

NO:

Figure 6

REFERENCE: BASE MAP PROVIDED BY NIAGARA NAVIGATOR, https://maps-beta.niagararegion.ca/Navigator/

REFERENCE: BASE MAP PROVIDED BY NIAGARA NAVIGATOR, https://maps-beta.niagararegion.ca/Navigator/

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LEGEND

- Property Boundary
- Borehole with Monitoring Well Location (BH/MW-1)
- Groundwater Contours
- Measured Groundwater Flow Direction

NIAGARA SOILS SOLUTIONS LTD.

CLIENT:

13071189 CANADA INC.

PROJECT:

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
4336 WILLICK ROAD
NIAGARA FALLS, ON.

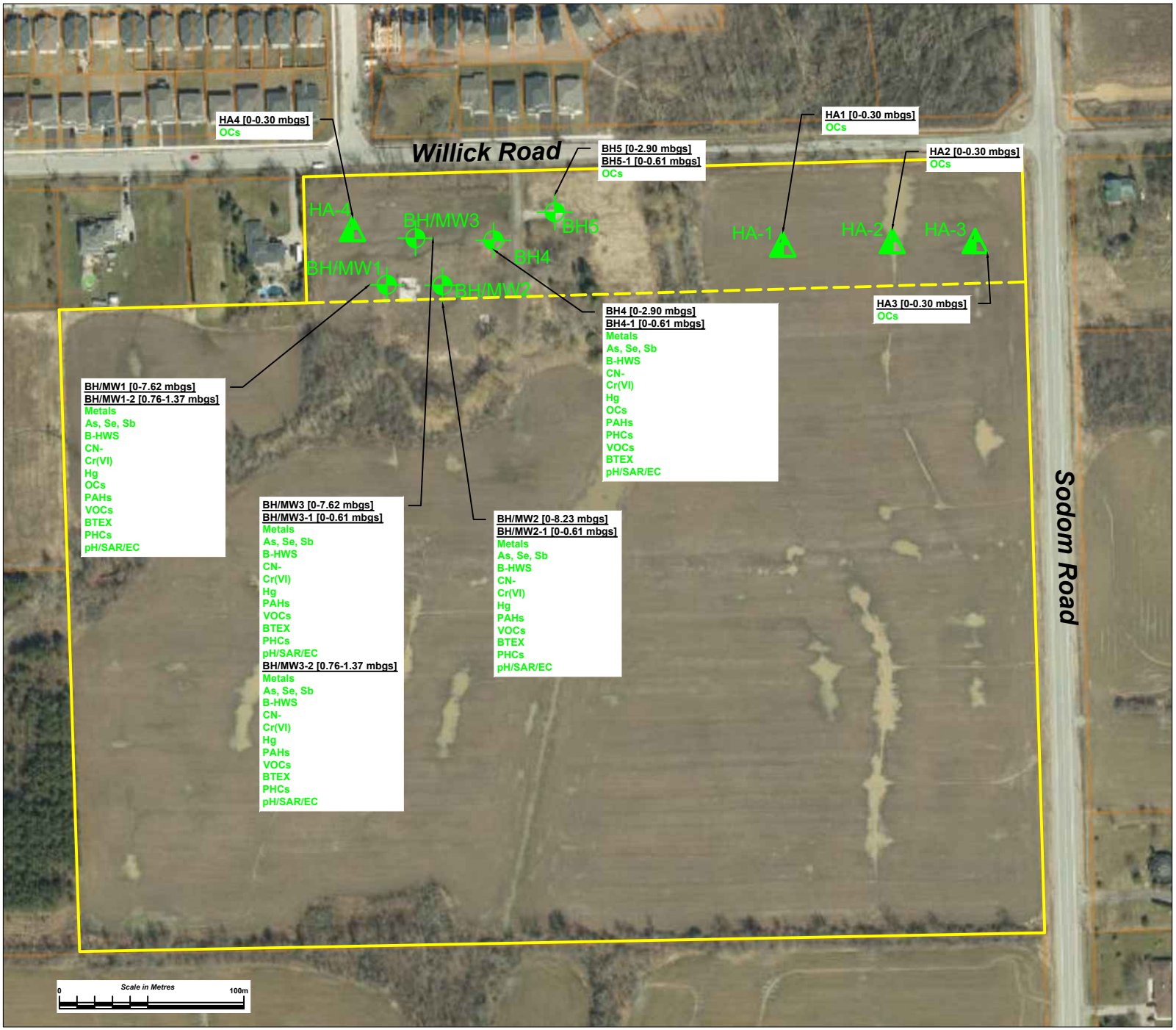
TITLE:

GROUNDWATER CONTOURS

DATE:	DECEMBER 2024
PROJECT NO:	NS2484-02
SCALE:	AS SHOWN
DRAWN: CN	REVIEWED: PA
DATUM: NAD 83	PROJECTION: 17T

NO:

Figure 7



REFERENCE: BASE MAP PROVIDED BY NIAGARA NAVIGATOR, https://maps-beta.niagararegion.ca/Navigator/

N
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LEGEND

- Property Boundary
- BH/MW-1 — Borehole with Monitoring Well Location
- BH 1 — Borehole Location
- HA-1 — Hand Auger Location
- Results Meet Criteria
- Results Exceed Criteria
- Not Analyzed
- Site Limit/Extent of Work Line

Results Compared to O. Reg. 153/04, Table 3: Residential, Med/Fine Criteria

NIAGARA SOILS SOLUTIONS LTD.

CLIENT:

13071189 CANADA INC.

PROJECT:

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
4336 WILLICK ROAD
NIAGARA FALLS, ON.

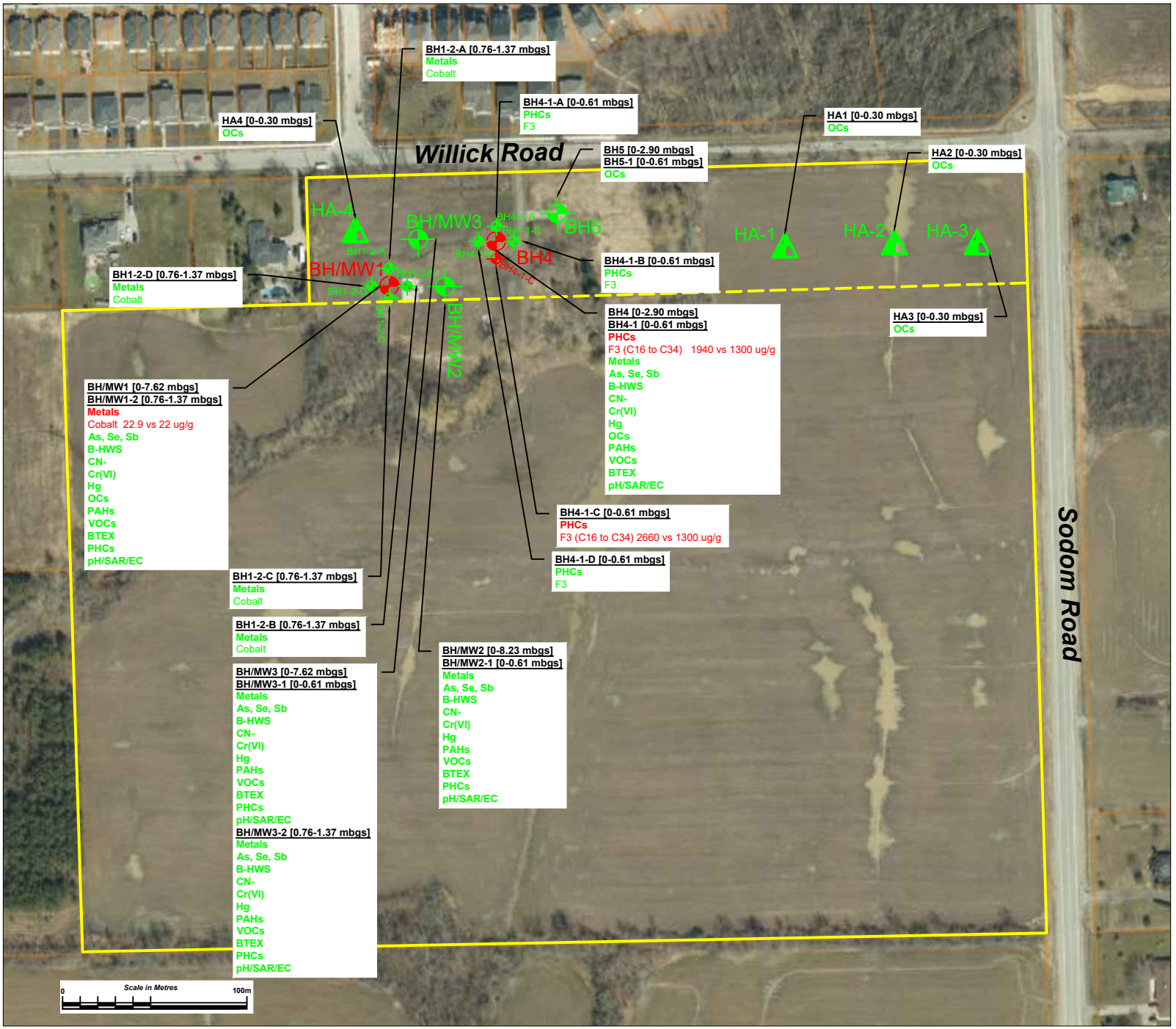
TITLE:

SOIL RESULTS

DATE:	DECEMBER 2024		
PROJECT NO:	NS2484-02		
SCALE:	AS SHOWN		
DRAWN:	CN	REVIEWED:	PA
DATUM:	NAD 83	PROJECTION:	17T

NO:

Figure 8



REFERENCE: BASE MAP PROVIDED BY NIAGARA NAVIGATOR, https://maps-beta.niagararegion.ca/Navigator/

N
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LEGEND

- Property Boundary
- BH/MW-1 — Borehole with Monitoring Well Location
- BH 1 — Borehole Location
- HA-1 — Hand Auger Location
- Results Meet Criteria
- Results Exceed Criteria
- Not Analyzed
- Site Limit/Extent of Work Line

Results Compared to O. Reg. 153/04, Table 3: Residential, Med/Fine Criteria

NIAGARA SOILS SOLUTIONS LTD.

CLIENT:

13071189 CANADA INC.

PROJECT:

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
4336 WILLICK ROAD
NIAGARA FALLS, ON.

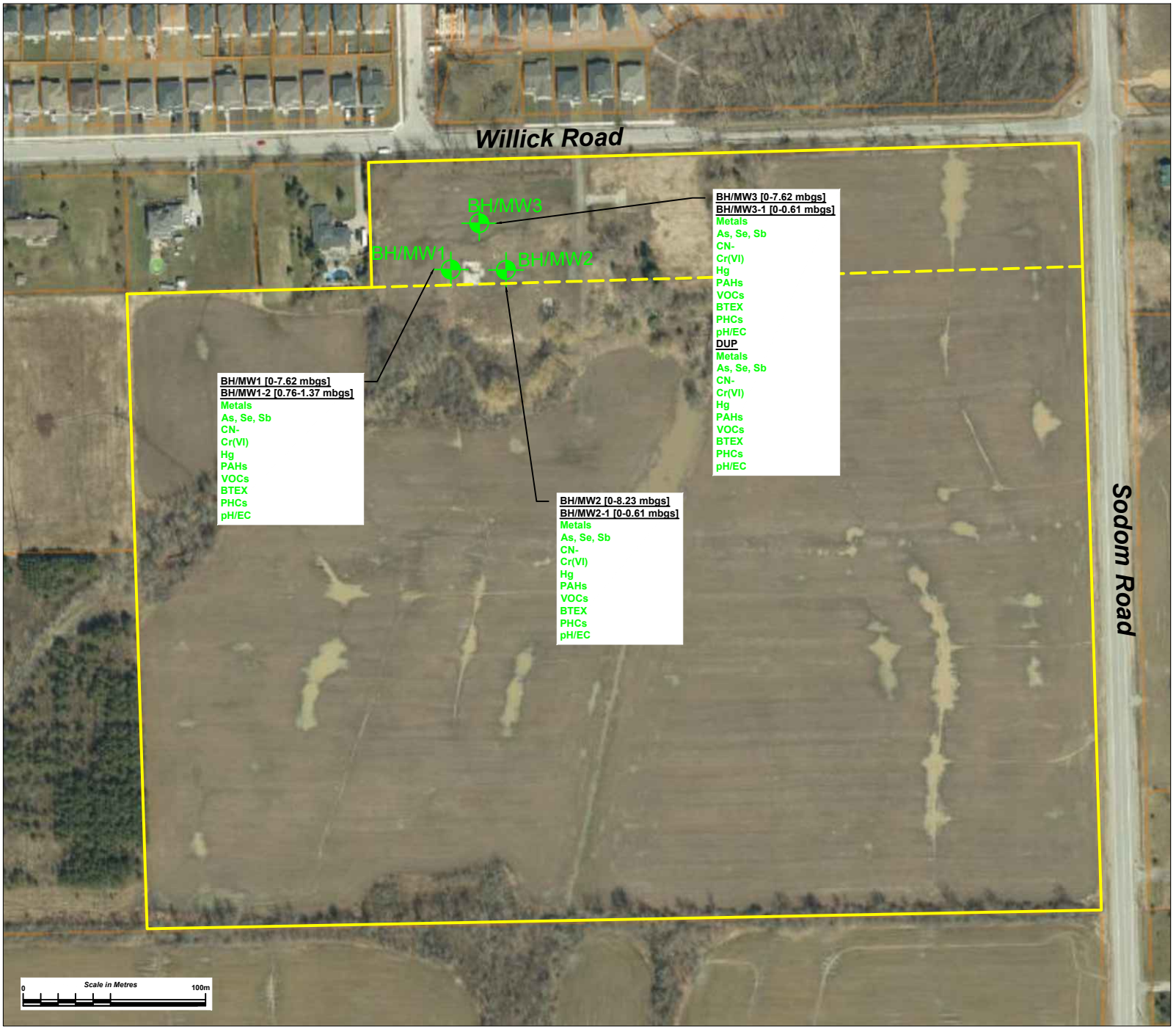
TITLE:

SOIL DELINEATION RESULTS

DATE:	DECEMBER 2024		
PROJECT NO:	NS2484-02		
SCALE:	AS SHOWN		
DRAWN:	CN	REVIEWED:	PA
DATUM:	NAD 83	PROJECTION:	17T

NO:

Figure 8B



REFERENCE: BASE MAP PROVIDED BY NIAGARA NAVIGATOR, https://maps-beta.niagararegion.ca/Navigator/

N
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LEGEND

- Property Boundary
- BH/MW-1 Borehole with Monitoring Well Location
- Results Meet Criteria
- Results Exceed Criteria
- Not Analyzed
- Site Limit/Extent of Work Line

Results Compared to O. Reg. 153/04, Table 3: Residential, Med/Fine Criteria

NIAGARA SOILS SOLUTIONS LTD.

CLIENT:

13071189 CANADA INC.

PROJECT:

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
4336 WILLICK ROAD
NIAGARA FALLS, ON.

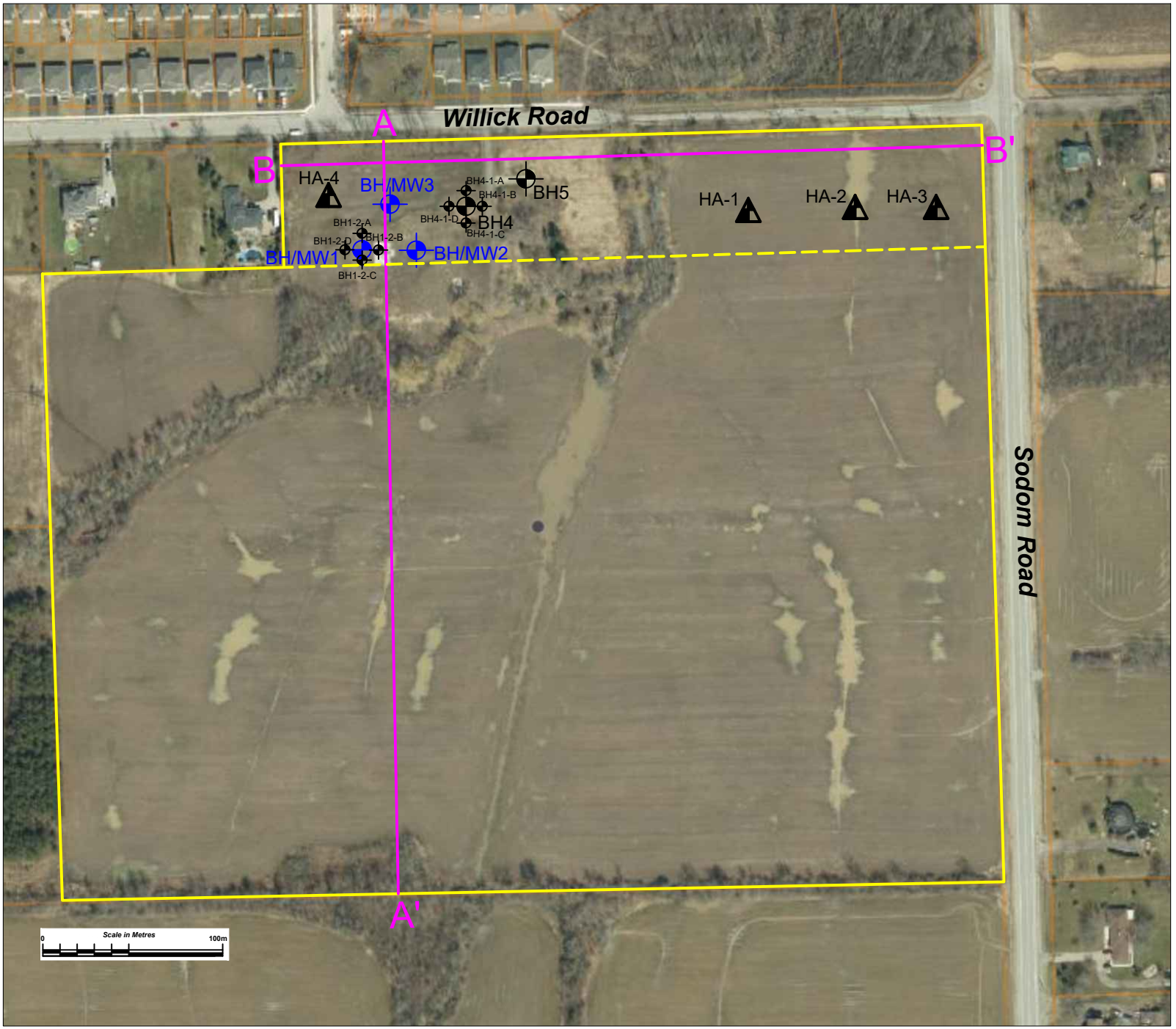
TITLE:

GROUNDWATER RESULTS

DATE:	DECEMBER 2024
PROJECT NO:	NS2484-02
SCALE:	AS SHOWN
DRAWN: CN	REVIEWED: PA
DATUM: NAD 83	PROJECTION: 17T

NO:

Figure 9



N

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LEGEND

- Property Boundary
- BH/MW-1 — Borehole with Monitoring Well Location
- BH 1 — Borehole Location
- HA-1 — Hand Auger Location
- X — X' — Cross Section

NIAGARA SOILS SOLUTIONS LTD.

CLIENT:

13071189 CANADA INC.

PROJECT:

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
4336 WILLICK ROAD
NIAGARA FALLS, ON.

TITLE:

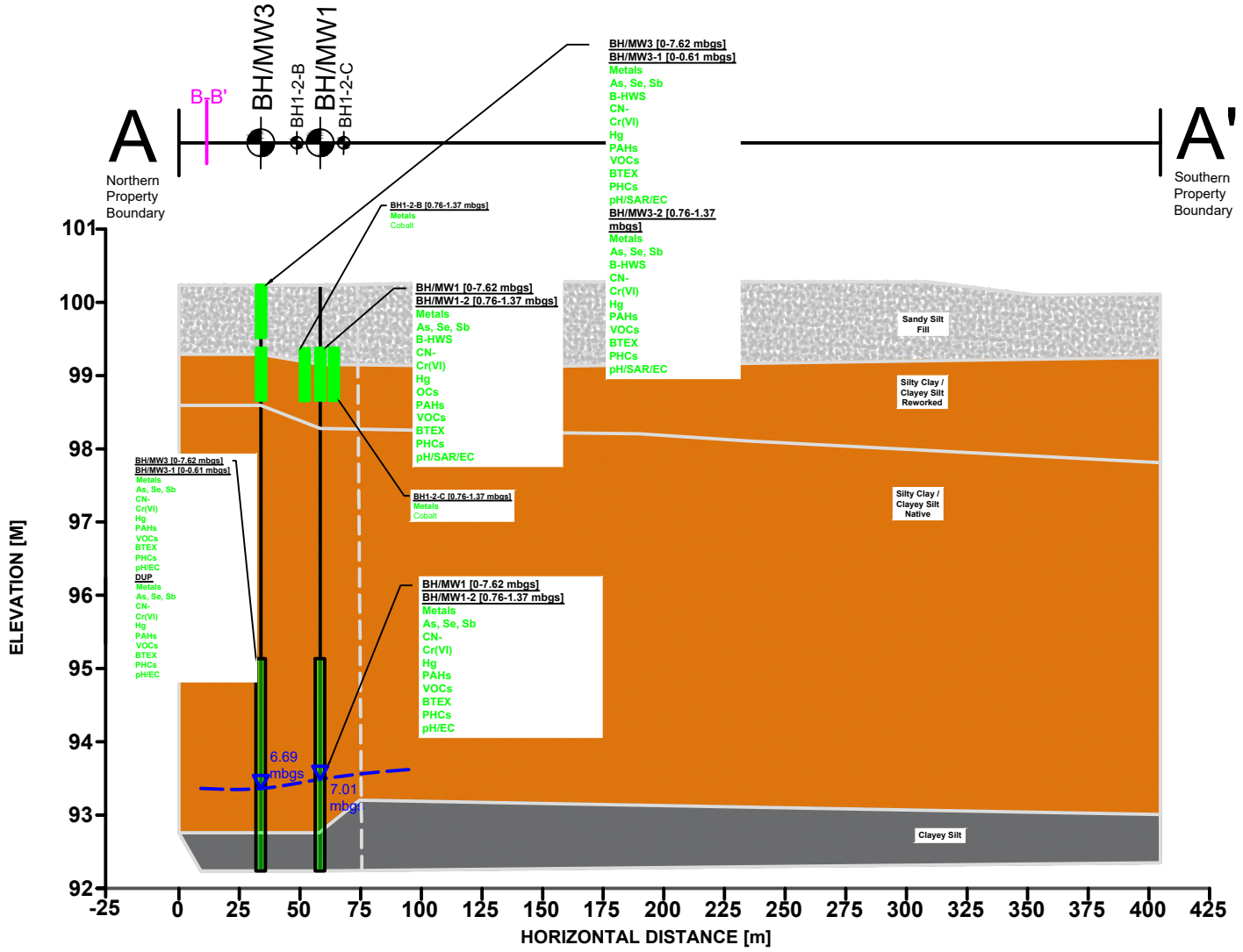
CROSS SECTION PLAN VIEW

DATE:	DECEMBER 2024
PROJECT NO:	NS2484-02
SCALE:	AS SHOWN
DRAWN: CN	REVIEWED: PA
DATUM: NAD 83	PROJECTION: 17T

NO:

Figure 10

REFERENCE: BASE MAP PROVIDED BY NIAGARA NAVIGATOR, https://maps-beta.niagararegion.ca/Navigator/



REFERENCE: BASE MAP PROVIDED BY NIAGARA NAVIGATOR, https://maps-beta.niagararegion.ca/Navigator/

LEGEND

- Clayey Silt Grey
- Sandy Silt Fill
- Silty Clay/Clayey Silt Reworked/Native
- Results Meet Criteria
- Results Exceed Criteria
- XXX Ground-water Level
- Screen Location
- Site Limit/Extent of Work Line

Results Compared to O. Reg. 153/04, Table 3: Residential, Med/Fine Criteria

NIAGARA SOILS SOLUTIONS LTD.

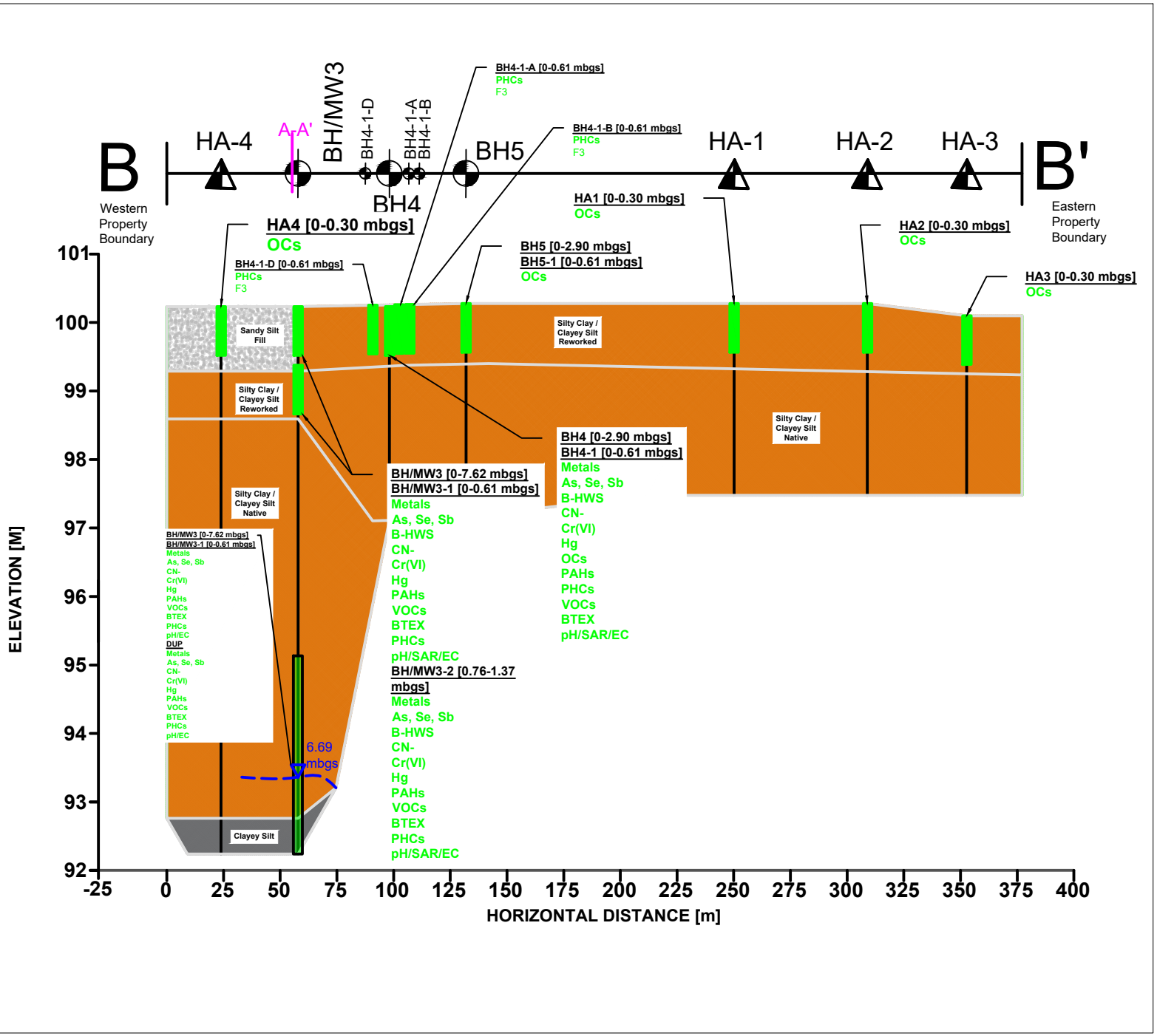
CLIENT:
13071189 CANADA INC.

PROJECT:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
4336 WILLICK ROAD
NIAGARA FALLS, ON.

TITLE:
CROSS SECTION; A-A'

DATE:	DECEMBER 2024
PROJECT NO:	NS2484-02
SCALE:	AS SHOWN
DRAWN: CN	REVIEWED: PA
DATUM: NAD 83	PROJECTION: 17T

NO:
Figure 11A



REFERENCE: BASE MAP PROVIDED BY NIAGARA NAVIGATOR, https://maps-beta.niagararegion.ca/Navigator/

LEGEND

- Clayey Silt Grey
- Sandy Silt Fill
- Silty Clay/Clayey Silt Reworked/Native
- Results Meet Criteria
- Results Exceed Criteria
- XXX Ground-water Level
- Screen Location

Results Compared to O. Reg. 153/04, Table 3: Residential, Med/Fine Criteria

NIAGARA SOILS SOLUTIONS LTD.

CLIENT:
13071189 CANADA INC.

PROJECT:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
4336 WILLICK ROAD
NIAGARA FALLS, ON.

TITLE:
CROSS SECTION; B-B'

DATE:	DECEMBER 2024
PROJECT NO:	NS2484-02
SCALE:	AS SHOWN
DRAWN: CN	REVIEWED: PA
DATUM: NAD 83	PROJECTION: 17T

NO:
Figure 11B

APPENDIX A

BOREHOLE LOGS

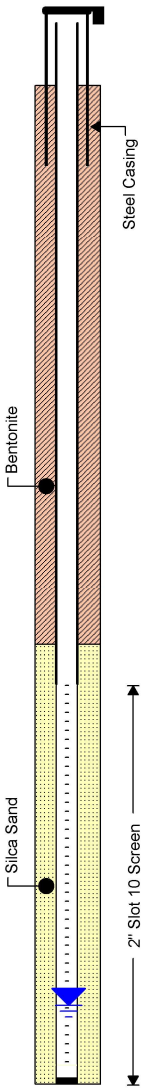
RECORD OF BOREHOLE: BH/MW-1

PROJECT NO.: NS2484-02
PROJECT: Phase Two ESA
LOCATION: 4336 Willick Rd, Niagara Falls
CLIENT: 13071189 Canada Inc.

DRILLING COMPANY: Elite Drilling
DRILLING METHOD: Directional Drilling
DRILL RIG: D-50
BOREHOLE COORDINATE (UTM): 4767153 N, 657776 E

SHEET 1 of 1
DATE STARTED: November 22, 2024
DATE COMPLETED: November 22, 2024
DATUM: Local Benchmark

SOIL PROFILE		SAMPLES						FIELD TESTING		LAB TESTING		
LITHOLOGY PLOT	DESCRIPTION	TYPE	NUMBER	SPT 'N' VALUE	RECOVERY (%)	DEPTH SCALE ft / m	ELEVATION (m / mbgs)	SPT (N) 25 50 75 100	COV (ppm / %LEL)	LAB ANALYSIS	WELL INSTALLATION	COMMENTS
	Ground Surface					ft m	0.00					
	Sandy Silt Fill Material Blackish Brown with some clay and trace gravel Firm, moist	SS	1	3, 2, 1, 1		0.0 0.0 1.0 2.0	0.00	3	0			
	Silty Clay / Clayey Silt Reworked Brown with trace gravel Firm, dry	SS	2	2, 4, 6, 9		3.0 1.0 4.0	-0.84 0.84	10	0	Soil: M&I, PHC/VOCs, PAHs, OCs		
	Silty Clay / Clayey Silt Native Brown with trace gravel and grey silt seams Very stiff to stiff, dry	SS	3	5, 8, 13, 13		5.0 6.0 2.0 7.0	-1.45 1.45	21	0			
		SS	4	5, 6, 9, 13		8.0 9.0 10.0 3.0		15	0		Bentonite	
		SS	5	5, 8, 9, 11		11.0 12.0 13.0 4.0		17	0			
		SS	6	4, 5, 6, 9		14.0 15.0 16.0 5.0		11	0		Silca Sand	
		SS	7	5, 4, 8, 7		17.0 18.0 19.0 20.0 6.0 21.0		12	0		2" Slot 10 Screen	
	Clayey Silt Greyish Brown with trace gravel Soft, dry to moist	AU	8			22.0 23.0 7.0 24.0	-7.16 7.16			GW: M&I, PHC/VOCs, PAHs		
	End of Borehole					25.0 26.0 8.0 27.0 28.0	-7.62 7.62					



SS = Split Spoon

AU = Auger Sample

Groundwater Level Upon Completion:
Secondary Groundwater Level:

INITIAL WATER LEVEL: 7.09 mbgs
SECONDARY WATER LEVEL: 7.01 mbgs
BOREHOLE CAVE UPON COMPLETION: N/A

INITIAL WATER LEVEL DATE: December 4, 2024
SECONDARY WATER LEVEL DATE: December 5, 2024

LOGGED: DN
COMPILED: DN
CHECKED: PA

Niagara Soils Solutions Ltd.
3300 Merrittville Highway, Unit 4
Thorold, Ontario, L2V 4Y6

Note: This borehole log has been prepared for environmental purposes and does not necessarily contain information suitable for a geotechnical assessment of the subsurface conditions. Borehole details as presented, do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified Professional Engineer/Geoscientist.

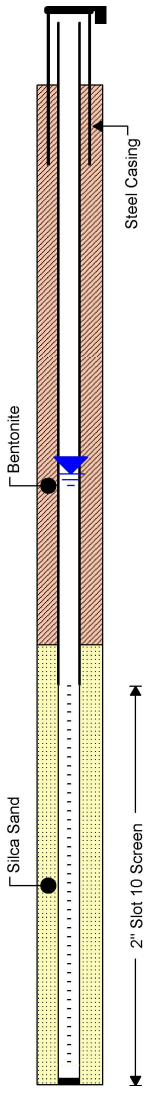
RECORD OF BOREHOLE: BH/MW-2

PROJECT NO.: NS2484-02
PROJECT: Phase Two ESA
LOCATION: 4336 Willick Rd, Niagara Falls
CLIENT: 13071189 Canada Inc.

DRILLING COMPANY: Elite Drilling
DRILLING METHOD: Directional Drilling
DRILL RIG: D-50
BOREHOLE COORDINATE (UTM): 4767153 N, 657798 E

SHEET 1 of 1
DATE STARTED: November 22, 2024
DATE COMPLETED: November 22, 2024
DATUM: Local Benchmark

SOIL PROFILE		SAMPLES						FIELD TESTING		LAB TESTING		
LITHOLOGY PLOT	DESCRIPTION	TYPE	NUMBER	SPT 'N' VALUE	RECOVERY (%)	DEPTH SCALE ft / m	ELEVATION (m / mbgs)	SPT (N) 25 50 75 100	COV (ppm / %LEL)	LAB ANALYSIS	WELL INSTALLATION	COMMENTS
	Ground Surface					ft m	0.00					
	Sandy Silt Fill Material Blackish Brown with trace clay and gravel Loose, wet	SS	1	22, 12, 13, 8		0.0 0.0 1.0 2.0	0.00 -0.69 0.69	25	0	Soil: M&I, PHC/VOCs, PAHs		SS = Split Spoon AU = Auger Sample
	Silty Clay / Clayey Silt Reworked Brown with trace gravel Firm, dry	SS	2	2, 4, 8, 9		3.0 1.0 4.0	-1.07 1.07	12	0			
	Silty Clay / Clayey Silt Native Brown with trace gravel and grey silt seams Very stiff to stiff, dry	SS	3	3, 11, 12, 15		5.0 6.0 2.0 7.0		23	0			
		SS	4	7, 11, 12, 14		8.0 9.0		23	0			
		SS	5	5, 8, 11, 15		10.0 3.0 11.0 12.0		19	0	GW: M&I, PHC/VOCs, PAHs		
		SS	6	5, 6, 10, 12		13.0 4.0 14.0 15.0 16.0 5.0 17.0		16	0			
		SS	7	3, 4, 4, 5		18.0 19.0 20.0 6.0 21.0 22.0		8	0			
	Clayey Silt Greyish Brown with trace gravel Soft, dry to moist	SS	8	2, 2, 2, 3		23.0 7.0 24.0 25.0 26.0 8.0	-7.16 7.16	4	0			
	End of Borehole					27.0 28.0	-8.23 8.23					



Groundwater Level Upon Completion:
Secondary Groundwater Level:

INITIAL WATER LEVEL: 1.36 mbgs
SECONDARY WATER LEVEL: 2.91 mbgs
BOREHOLE CAVE UPON COMPLETION: N/A

INITIAL WATER LEVEL DATE: December 4, 2024
SECONDARY WATER LEVEL DATE: December 5, 2024

LOGGED: DN
COMPILED: DN
CHECKED: PA

Niagara Soils Solutions Ltd.
3300 Merrittville Highway, Unit 4
Thorold, Ontario, L2V 4Y6

Note: This borehole log has been prepared for environmental purposes and does not necessarily contain information suitable for a geotechnical assessment of the subsurface conditions. Borehole details as presented, do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified Professional Engineer/Geoscientist.

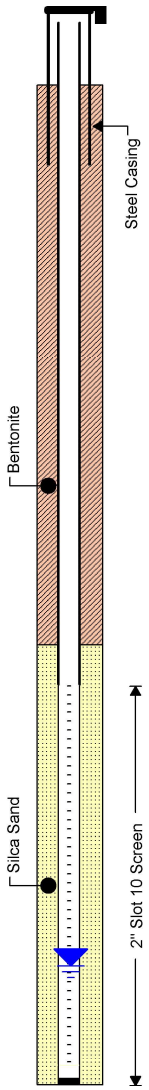
RECORD OF BOREHOLE: BH/MW-3

PROJECT NO.: NS2484-02
PROJECT: Phase Two ESA
LOCATION: 4336 Willick Rd, Niagara Falls
CLIENT: 13071189 Canada Inc.

DRILLING COMPANY: Elite Drilling
DRILLING METHOD: Directional Drilling
DRILL RIG: D-50
BOREHOLE COORDINATE (UTM): 4767173 N, 657783 E

SHEET 1 of 1
DATE STARTED: November 22, 2024
DATE COMPLETED: November 22, 2024
DATUM: Local Benchmark

SOIL PROFILE		SAMPLES						FIELD TESTING		LAB TESTING		
LITHOLOGY PLOT	DESCRIPTION	TYPE	NUMBER	SPT 'N' VALUE	RECOVERY (%)	DEPTH SCALE ft / m	ELEVATION (m / mbgs)	SPT (N) 25 50 75 100	COV (ppm / %LEL)	LAB ANALYSIS	WELL INSTALLATION	COMMENTS
	Ground Surface					ft m	0.00					
	Sandy Silt Fill Material Blackish Brown with some gravel and trace clay Loose, wet	SS	1	3, 4, 13, 2		0.0 0.0 1.0 2.0	0.00 -0.69	17	0	Soil: M&I, PHC/VOCs, PAHs		SS = Split Spoon AU = Auger Sample
	Silty Clay / Clayey Silt Reworked Brown with trace gravel Firm, dry	SS	2	3, 4, 5, 9		3.0 1.0 4.0	0.69 -1.22	9	0	Soil: M&I, PHC/VOCs, PAHs		
	Silty Clay / Clayey Silt Native Brown with trace gravel and grey silt seams Very stiff, dry	SS	3	5, 9, 13, 15		5.0 6.0 2.0 7.0	1.22	22	0			
		SS	4	7, 11, 15, 18		8.0 9.0 10.0 3.0		26	0			
		SS	5	6, 8, 12, 14		11.0 12.0 13.0 4.0		20	0			
		SS	6	5, 8, 11, 12		14.0 15.0 16.0 5.0		17	0			
		SS	7	4, 7, 9, 12		17.0 18.0 19.0 20.0 6.0 21.0		16	0	GW: M&I, PHC/VOCs, PAHs		
	Clayey Silt Greyish Brown with trace gravel Soft, dry to moist	AU	8			22.0 23.0 7.0 24.0	-7.16 7.16 -7.62					
	End of Borehole					25.0 26.0 8.0 27.0 28.0	7.62					



Groundwater Level Upon Completion:
Secondary Groundwater Level:

INITIAL WATER LEVEL: 6.87 mbgs
SECONDARY WATER LEVEL: 6.69 mbgs
BOREHOLE CAVE UPON COMPLETION: N/A

INITIAL WATER LEVEL DATE: December 4, 2024
SECONDARY WATER LEVEL DATE: December 5, 2024

LOGGED: DN
COMPILED: DN
CHECKED: PA

Niagara Soils Solutions Ltd.
3300 Merrittville Highway, Unit 4
Thorold, Ontario, L2V 4Y6

Note: This borehole log has been prepared for environmental purposes and does not necessarily contain information suitable for a geotechnical assessment of the subsurface conditions. Borehole details as presented, do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified Professional Engineer/Geoscientist.

RECORD OF BOREHOLE: BH-4

PROJECT NO.: NS2484-02
PROJECT: Phase Two ESA
LOCATION: 4336 Willick Rd, Niagara Falls
CLIENT: 13071189 Canada Inc.

DRILLING COMPANY: Elite Drilling
DRILLING METHOD: Directional Drilling
DRILL RIG: D-50
BOREHOLE COORDINATE (UTM): 4767155 N, 657824 E

SHEET 1 of 1
DATE STARTED: November 22, 2024
DATE COMPLETED: November 22, 2024
DATUM: Local Benchmark

SOIL PROFILE		SAMPLES				DEPTH SCALE ft / m	ELEVATION (m / mbgs)	FIELD TESTING		LAB TESTING		
LITHOLOGY PLOT	DESCRIPTION	TYPE	NUMBER	SPT 'N' VALUE	RECOVERY (%)			SPT (N) 25 50 75 100	COV (ppm / %LEL)	LAB ANALYSIS	WELL INSTALLATION	COMMENTS
	Ground Surface					ft m	0.00					
	Silty Clay / Clayey Silt Reworked Brown with trace gravel Firm, dry	AU	1			0.0 0.0 1.0	0.00		0	Soil: M&I, PHC/VOCs, PAHs, OCs		AU = Auger Sample
	Silty Clay / Clayey Silt Native Brown with trace gravel and grey silt seams Stiff, dry					2.0	-0.69 0.69					
		AU	2			3.0 1.0 4.0			0			
		AU	3			5.0 6.0 2.0			0			
		AU	4			7.0 8.0			0			
	End of Borehole					9.0 3.0 10.0	-2.90 2.90					
						11.0 12.0 13.0 4.0 14.0 15.0						

Groundwater Level Upon Completion:
Secondary Groundwater Level:

INITIAL WATER LEVEL: N/A
SECONDARY WATER LEVEL: N/A
BOREHOLE CAVE UPON COMPLETION: N/A

INITIAL WATER LEVEL DATE: N/A
SECONDARY WATER LEVEL DATE: N/A

NIAGARA SOILS SOLUTIONS LTD.

LOGGED: DN
COMPILED: DN
CHECKED: PA

Niagara Soils Solutions Ltd.
3300 Merrittville Highway, Unit 4
Thorold, Ontario, L2V 4Y6

RECORD OF BOREHOLE: BH-5

PROJECT NO.: NS2484-02
PROJECT: Phase Two ESA
LOCATION: 4336 Willick Rd, Niagara Falls
CLIENT: 13071189 Canada Inc.

DRILLING COMPANY: Elite Drilling
DRILLING METHOD: Directional Drilling
DRILL RIG: D-50
BOREHOLE COORDINATE (UTM): 4767197 N, 657864 E

SHEET 1 of 1
DATE STARTED: November 22, 2024
DATE COMPLETED: November 22, 2024
DATUM: Local Benchmark

SOIL PROFILE		SAMPLES				DEPTH SCALE ft / m	ELEVATION (m / mbgs)	FIELD TESTING		LAB TESTING	WELL INSTALLATION	COMMENTS
LITHOLOGY PLOT	DESCRIPTION	TYPE	NUMBER	SPT 'N' VALUE	RECOVERY (%)			SPT (N) 25 50 75 100	COV (ppm / %LEL)	LAB ANALYSIS		
	Ground Surface					ft m 0.0 0.0	0.00					
	125 mm Granular Material						0.00					
	Silty Clay / Clayey Silt Reworked Brown with trace gravel Firm, dry	AU	1			1.0			0	Soil: OCs		AU = Auger Sample
						2.0	-0.69					
	Silty Clay / Clayey Silt Native Brown with trace gravel and grey silt seams Stiff, dry	AU	2			3.0 1.0 4.0	0.69		0			
		AU	3			5.0 6.0 2.0 7.0			0			
		AU	4			8.0			0			
						9.0	-2.90					
	End of Borehole					10.0 3.0 11.0 12.0 13.0 4.0 14.0 15.0	2.90					

Groundwater Level Upon Completion:
Secondary Groundwater Level:

INITIAL WATER LEVEL: N/A
SECONDARY WATER LEVEL: N/A
BOREHOLE CAVE UPON COMPLETION: N/A

INITIAL WATER LEVEL DATE: N/A
SECONDARY WATER LEVEL DATE: N/A

NIAGARA SOILS SOLUTIONS LTD.

LOGGED: DN
COMPILED: DN
CHECKED: PA

Niagara Soils Solutions Ltd.
3300 Merrittville Highway, Unit 4
Thorold, Ontario, L2V 4Y6

APPENDIX B

CERTIFICATES OF ANALYSIS - SOIL

AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
3300 MERRITTVILLE HIGHWAY
THOROLD, ON L2V 4Y6
289-407-6341

ATTENTION TO: Jodie Glasier

PROJECT: NS2484-02

AGAT WORK ORDER: 24H224669

SOIL ANALYSIS REVIEWED BY: Sukhwinder Randhawa, Inorganic Team Lead

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Nov 28, 2024

PAGES (INCLUDING COVER): 21

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
- *Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.*
- *All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.*

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 24H224669

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-11-25

DATE REPORTED: 2024-11-28

		SAMPLE DESCRIPTION:		BH1-2	BH2-1	BH3-1	BH3-2	BH4-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-11-22	2024-11-22	2024-11-22	2024-11-22	2024-11-22
Parameter	Unit	G / S	RDL	6353641	6353649	6353650	6353651	6353652
Antimony	µg/g	7.5	0.8	<0.8	<0.8	<0.8	<0.8	1.6
Arsenic	µg/g	18	1	8	7	17	8	9
Barium	µg/g	390	2.0	247	83.0	104	191	94.7
Beryllium	µg/g	4	0.5	2.1	0.7	0.9	1.4	0.7
Boron	µg/g	120	5	13	11	12	21	11
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.38	1.11	0.56	<0.10	0.54
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	0.5	<0.5	<0.5
Chromium	µg/g	160	5	44	27	37	37	27
Cobalt	µg/g	22	0.8	**22.9**	9.1	9.6	16.9	8.2
Copper	µg/g	140	1.0	32.9	25.9	31.8	28.0	24.9
Lead	µg/g	120	1	13	58	68	11	55
Molybdenum	µg/g	6.9	0.5	0.7	1.7	1.5	0.9	1.3
Nickel	µg/g	100	1	49	28	31	37	35
Selenium	µg/g	2.4	0.8	<0.8	<0.8	0.9	<0.8	<0.8
Silver	µg/g	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	23	0.50	0.81	0.50	0.67	0.86	0.63
Vanadium	µg/g	86	2.0	63.9	42.5	44.3	53.9	47.3
Zinc	µg/g	340	5	94	123	221	75	274
Chromium, Hexavalent	µg/g	8	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	0.11	0.12	<0.10	0.17
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.280	0.335	0.461	0.330	0.420
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	0.508	0.604	0.380	0.815	0.305
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	6.95	7.05	6.96	7.07	7.03

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 24H224669

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-11-25 **DATE REPORTED: 2024-11-28**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T2 S RPI CT
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6353641-6353652 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 24H224669

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2024-11-25 **DATE REPORTED: 2024-11-28**

		SAMPLE DESCRIPTION:		BH1-2	BH4-1	BH5-1	HA-1	HA-2	HA-3	HA-4
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-11-22	2024-11-22	2024-11-22	2024-11-22	2024-11-22	2024-11-22	2024-11-22
Parameter	**Unit**	**G / S**	**RDL**	**6353641**	**6353652**	**6353653**	**6353654**	**6353655**	**6353656**	**6353657**
Hexachloroethane	µg/g	0.089	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Gamma-Hexachlorocyclohexane	µg/g	0.056	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	µg/g	0.15	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Aldrin	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan I	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan II	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	µg/g	0.04	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Alpha-Chlordane	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
gamma-Chlordane	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
op'-DDE	ug/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDE	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DDE	µg/g	0.26	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
op'-DDD	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDD	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DDD	µg/g	3.3	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
op'-DDT	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDT	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DDT (Total)	µg/g	1.4	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Methoxychlor	µg/g	0.13	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	µg/g	0.52	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	µg/g	0.012	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Moisture Content	%		0.1	20.6	23.1	24.3	27.5	22.3	25.4	6.8
wet weight OC	g		0.01	10.81	10.35	10.00	10.18	10.72	10.90	10.97
Surrogate	**Unit**	**Acceptable Limits**								
TCMX	%	50-140		76	71	79	76	82	77	78
Decachlorobiphenyl	%	50-140		88	86	80	82	89	83	88

Certified By: NPopnikolof

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 24H224669

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2024-11-25 **DATE REPORTED: 2024-11-28**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T2 S RPI CT
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6353641-6353657 Results are based on the dry weight of the soil.
DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.
DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.
DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.
Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.
Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popnikolof

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AGAT WORK ORDER: 24H224669

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2024-11-25 **DATE REPORTED: 2024-11-28**

		SAMPLE DESCRIPTION:		BH1-2	BH2-1	BH3-1	BH3-2	BH4-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-11-22	2024-11-22	2024-11-22	2024-11-22	2024-11-22
Parameter	**Unit**	**G / S**	**RDL**	**6353641**	**6353649**	**6353650**	**6353651**	**6353652**
Naphthalene	µg/g	0.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	7.9	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	62	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	6.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.67	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05	0.07	<0.05	<0.05	<0.05
Pyrene	µg/g	78	0.05	<0.05	0.06	<0.05	<0.05	<0.05
Benzo(a)anthracene	µg/g	0.5	0.05	<0.05	<0.05	<0.05	<0.05	0.05
Chrysene	µg/g	7	0.05	<0.05	0.06	<0.05	<0.05	0.06
Benzo(b)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	6.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g	0.99	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	20.6	19.2	25.6	22.2	23.1
Surrogate	**Unit**	**Acceptable Limits**						
Naphthalene-d8	%	50-140		75	110	85	90	90
Acridine-d9	%	50-140		85	90	100	100	75
Terphenyl-d14	%	50-140		80	75	110	80	90

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T2 S RPI CT
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6353641-6353652 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowich

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 24H224669

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2024-11-25 **DATE REPORTED: 2024-11-28**

		SAMPLE DESCRIPTION:		BH1-2	BH2-1	BH3-1	BH3-2	BH4-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-11-22	2024-11-22	2024-11-22	2024-11-22	2024-11-22
Parameter	**Unit**	**G / S**	**RDL**	**6353641**	**6353649**	**6353650**	**6353651**	**6353652**
F1 (C6 to C10)	µg/g	55	5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	98	10	<10	<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	300	50	<50	109	<50	<50	**1940**
F3 (C16 to C34) minus PAHs	µg/g		50	<50	109	<50	<50	1940
F4 (C34 to C50)	µg/g	2800	50	<50	<50	<50	<50	1240
Gravimetric Heavy Hydrocarbons	µg/g	2800	50	NA	NA	NA	NA	NA
Moisture Content	%		0.1	20.6	19.2	25.6	22.2	23.1
Surrogate	**Unit**	**Acceptable Limits**						
Toluene-d8	%	50-140		90	85	80	102	88
Terphenyl	%	60-140		83	96	93	92	92

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T2 S RPI CT
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6353641-6353652 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 24H224669

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-11-25 **DATE REPORTED: 2024-11-28**

SAMPLE DESCRIPTION:				BH1-2	BH2-1	BH3-1	BH3-2	BH4-1
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2024-11-22	2024-11-22	2024-11-22	2024-11-22	2024-11-22
Parameter	Unit	G / S	RDL	6353641	6353649	6353650	6353651	6353652
Dichlorodifluoromethane	µg/g	16	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.084	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.47	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	1.9	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.38	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.21	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.061	0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	1.5	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	1.7	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	2.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	2.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.28	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	1.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05

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Certificate of Analysis

AGAT WORK ORDER: 24H224669

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-11-25 **DATE REPORTED: 2024-11-28**

		SAMPLE DESCRIPTION:		BH1-2	BH2-1	BH3-1	BH3-2	BH4-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-11-22	2024-11-22	2024-11-22	2024-11-22	2024-11-22
Parameter	**Unit**	**G / S**	**RDL**	**6353641**	**6353649**	**6353650**	**6353651**	**6353652**
Bromoform	ug/g	0.27	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g	0.7	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	4.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.083	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	1.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	3.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	2.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	20.6	19.2	25.6	22.2	23.1
Surrogate	**Unit**	**Acceptable Limits**						
Toluene-d8	% Recovery	50-140		90	85	80	102	88
4-Bromofluorobenzene	% Recovery	50-140		99	98	95	105	110

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T2 S RPI CT
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6353641-6353652 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popnikolof

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Exceedance Summary

AGAT WORK ORDER: 24H224669

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
6353641	BH1-2	ON T2 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Cobalt	µg/g	22	22.9
6353652	BH4-1	ON T2 S RPI CT	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)	F3 (C16 to C34)	µg/g	300	1940

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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H224669

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

Soil Analysis

RPT Date: Nov 28, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	6353422		<0.8	<0.8	NA	< 0.8	135%	70%	130%	83%	80%	120%	79%	70%	130%
Arsenic	6353422		8	8	0.0%	< 1	117%	70%	130%	102%	80%	120%	119%	70%	130%
Barium	6353422		82.3	77.8	5.6%	< 2.0	102%	70%	130%	100%	80%	120%	113%	70%	130%
Beryllium	6353422		0.7	0.7	NA	< 0.5	126%	70%	130%	114%	80%	120%	126%	70%	130%
Boron	6353422		10	10	NA	< 5	100%	70%	130%	103%	80%	120%	121%	70%	130%
Boron (Hot Water Soluble)	6353422		0.20	0.19	NA	< 0.10	88%	60%	140%	96%	70%	130%	105%	60%	140%
Cadmium	6353422		<0.5	<0.5	NA	< 0.5	105%	70%	130%	92%	80%	120%	120%	70%	130%
Chromium	6353422		22	20	NA	< 5	106%	70%	130%	97%	80%	120%	101%	70%	130%
Cobalt	6353422		7.9	7.1	10.7%	< 0.8	99%	70%	130%	101%	80%	120%	113%	70%	130%
Copper	6353422		29.2	27.8	4.9%	< 1.0	100%	70%	130%	101%	80%	120%	100%	70%	130%
Lead	6353422		100	95	5.1%	< 1	102%	70%	130%	98%	80%	120%	94%	70%	130%
Molybdenum	6353422		0.8	0.7	NA	< 0.5	102%	70%	130%	103%	80%	120%	116%	70%	130%
Nickel	6353422		19	17	11.1%	< 1	103%	70%	130%	106%	80%	120%	109%	70%	130%
Selenium	6353422		<0.8	<0.8	NA	< 0.8	125%	70%	130%	98%	80%	120%	113%	70%	130%
Silver	6353422		<0.5	<0.5	NA	< 0.5	100%	70%	130%	98%	80%	120%	113%	70%	130%
Thallium	6353422		<0.5	<0.5	NA	< 0.5	91%	70%	130%	101%	80%	120%	115%	70%	130%
Uranium	6353422		<0.50	<0.50	NA	< 0.50	95%	70%	130%	101%	80%	120%	115%	70%	130%
Vanadium	6353422		33.9	29.0	15.6%	< 2.0	112%	70%	130%	103%	80%	120%	110%	70%	130%
Zinc	6353422		118	109	7.9%	< 5	105%	70%	130%	102%	80%	120%	108%	70%	130%
Chromium, Hexavalent	6353651	6353651	<0.2	<0.2	NA	< 0.2	111%	70%	130%	98%	80%	120%	71%	70%	130%
Cyanide, WAD	6353579		<0.040	<0.040	NA	< 0.040	90%	70%	130%	93%	80%	120%	88%	70%	130%
Mercury	6353422		0.14	0.15	NA	< 0.10	98%	70%	130%	101%	80%	120%	112%	70%	130%
Electrical Conductivity (2:1)	6353422		0.176	0.211	18.1%	< 0.005	94%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	6360935		2.53	2.55	0.8%	NA	NA								
pH, 2:1 CaCl2 Extraction	6353627		6.81	6.93	1.7%	NA	99%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
AGAT WORK ORDER: 24H224669
PROJECT: NS2484-02
ATTENTION TO: Jodie Glasier
SAMPLING SITE:
SAMPLED BY:

Trace Organics Analysis

RPT Date: Nov 28, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)															
F1 (C6 to C10)	6352607		<5	<5	NA	< 5	94%	60%	140%	99%	60%	140%	86%	60%	140%
F2 (C10 to C16)	6345388		< 10	< 10	NA	< 10	117%	60%	140%	97%	60%	140%	102%	60%	140%
F3 (C16 to C34)	6345388		< 50	< 50	NA	< 50	116%	60%	140%	89%	60%	140%	109%	60%	140%
F4 (C34 to C50)	6345388		< 50	< 50	NA	< 50	85%	60%	140%	125%	60%	140%	105%	60%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	6353649	6353649	<0.05	<0.05	NA	< 0.05	77%	50%	140%	83%	50%	140%	78%	50%	140%
Acenaphthylene	6353649	6353649	<0.05	<0.05	NA	< 0.05	83%	50%	140%	73%	50%	140%	103%	50%	140%
Acenaphthene	6353649	6353649	<0.05	<0.05	NA	< 0.05	82%	50%	140%	110%	50%	140%	88%	50%	140%
Fluorene	6353649	6353649	<0.05	<0.05	NA	< 0.05	84%	50%	140%	103%	50%	140%	75%	50%	140%
Phenanthrene	6353649	6353649	<0.05	<0.05	NA	< 0.05	83%	50%	140%	88%	50%	140%	75%	50%	140%
Anthracene	6353649	6353649	<0.05	<0.05	NA	< 0.05	79%	50%	140%	95%	50%	140%	93%	50%	140%
Fluoranthene	6353649	6353649	0.07	0.09	NA	< 0.05	92%	50%	140%	103%	50%	140%	68%	50%	140%
Pyrene	6353649	6353649	0.06	0.07	NA	< 0.05	92%	50%	140%	103%	50%	140%	71%	50%	140%
Benzo(a)anthracene	6353649	6353649	<0.05	<0.05	NA	< 0.05	87%	50%	140%	90%	50%	140%	98%	50%	140%
Chrysene	6353649	6353649	0.06	0.06	NA	< 0.05	95%	50%	140%	73%	50%	140%	83%	50%	140%
Benzo(b)fluoranthene	6353649	6353649	<0.05	<0.05	NA	< 0.05	84%	50%	140%	90%	50%	140%	68%	50%	140%
Benzo(k)fluoranthene	6353649	6353649	<0.05	<0.05	NA	< 0.05	90%	50%	140%	95%	50%	140%	85%	50%	140%
Benzo(a)pyrene	6353649	6353649	<0.05	<0.05	NA	< 0.05	82%	50%	140%	88%	50%	140%	73%	50%	140%
Indeno(1,2,3-cd)pyrene	6353649	6353649	<0.05	<0.05	NA	< 0.05	95%	50%	140%	93%	50%	140%	70%	50%	140%
Dibenz(a,h)anthracene	6353649	6353649	<0.05	<0.05	NA	< 0.05	101%	50%	140%	90%	50%	140%	95%	50%	140%
Benzo(g,h,i)perylene	6353649	6353649	<0.05	<0.05	NA	< 0.05	90%	50%	140%	95%	50%	140%	78%	50%	140%
O. Reg. 153(511) - OC Pesticides (Soil)															
Hexachloroethane	6347774		< 0.005	< 0.005	NA	< 0.005	88%	50%	140%	76%	50%	140%	78%	50%	140%
Gamma-Hexachlorocyclohexane	6347774		< 0.005	< 0.005	NA	< 0.005	91%	50%	140%	92%	50%	140%	90%	50%	140%
Heptachlor	6347774		< 0.005	< 0.005	NA	< 0.005	86%	50%	140%	105%	50%	140%	102%	50%	140%
Aldrin	6347774		< 0.005	< 0.005	NA	< 0.005	104%	50%	140%	96%	50%	140%	95%	50%	140%
Heptachlor Epoxide	6347774		< 0.005	< 0.005	NA	< 0.005	96%	50%	140%	102%	50%	140%	89%	50%	140%
Endosulfan I	6347774		< 0.005	< 0.005	NA	< 0.005	95%	50%	140%	92%	50%	140%	90%	50%	140%
Endosulfan II	6347774		< 0.005	< 0.005	NA	< 0.005	89%	50%	140%	90%	50%	140%	88%	50%	140%
Alpha-Chlordane	6347774		< 0.005	< 0.005	NA	< 0.005	92%	50%	140%	92%	50%	140%	85%	50%	140%
gamma-Chlordane	6347774		< 0.005	< 0.005	NA	< 0.005	94%	50%	140%	94%	50%	140%	82%	50%	140%
op'-DDE	6347774		< 0.005	< 0.005	NA	< 0.005	108%	50%	140%	101%	50%	140%	92%	50%	140%
pp'-DDE	6347774		< 0.005	< 0.005	NA	< 0.005	93%	50%	140%	94%	50%	140%	84%	50%	140%
op'-DDD	6347774		< 0.005	< 0.005	NA	< 0.005	103%	50%	140%	86%	50%	140%	84%	50%	140%
pp'-DDD	6347774		< 0.005	< 0.005	NA	< 0.005	88%	50%	140%	104%	50%	140%	94%	50%	140%
op'-DDT	6347774		< 0.005	< 0.005	NA	< 0.005	108%	50%	140%	105%	50%	140%	86%	50%	140%
pp'-DDT	6347774		< 0.005	< 0.005	NA	< 0.005	98%	50%	140%	82%	50%	140%	80%	50%	140%
Dieldrin	6347774		< 0.005	< 0.005	NA	< 0.005	88%	50%	140%	89%	50%	140%	90%	50%	140%

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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H224669

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Nov 28, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Endrin	6347774		< 0.005	< 0.005	NA	< 0.005	98%	50%	140%	93%	50%	140%	102%	50%	140%
Methoxychlor	6347774		< 0.005	< 0.005	NA	< 0.005	92%	50%	140%	83%	50%	140%	86%	50%	140%
Hexachlorobenzene	6347774		< 0.005	< 0.005	NA	< 0.005	88%	50%	140%	80%	50%	140%	79%	50%	140%
Hexachlorobutadiene	6347774		< 0.01	< 0.01	NA	< 0.01	96%	50%	140%	82%	50%	140%	80%	50%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	6352607		<0.05	<0.05	NA	< 0.05	83%	50%	140%	79%	50%	140%	76%	50%	140%
Vinyl Chloride	6352607		<0.02	<0.02	NA	< 0.02	106%	50%	140%	94%	50%	140%	114%	50%	140%
Bromomethane	6352607		<0.05	<0.05	NA	< 0.05	113%	50%	140%	106%	50%	140%	106%	50%	140%
Trichlorofluoromethane	6352607		<0.05	<0.05	NA	< 0.05	109%	50%	140%	121%	50%	140%	103%	50%	140%
Acetone	6352607		<0.50	<0.50	NA	< 0.50	122%	50%	140%	97%	50%	140%	130%	50%	140%
1,1-Dichloroethylene	6352607		<0.05	<0.05	NA	< 0.05	93%	50%	140%	89%	60%	130%	100%	50%	140%
Methylene Chloride	6352607		<0.05	<0.05	NA	< 0.05	94%	50%	140%	109%	60%	130%	102%	50%	140%
Trans- 1,2-Dichloroethylene	6352607		<0.05	<0.05	NA	< 0.05	81%	50%	140%	99%	60%	130%	96%	50%	140%
Methyl tert-butyl Ether	6352607		<0.05	<0.05	NA	< 0.05	115%	50%	140%	76%	60%	130%	101%	50%	140%
1,1-Dichloroethane	6352607		<0.02	<0.02	NA	< 0.02	89%	50%	140%	82%	60%	130%	82%	50%	140%
Methyl Ethyl Ketone	6352607		<0.50	<0.50	NA	< 0.50	85%	50%	140%	116%	50%	140%	100%	50%	140%
Cis- 1,2-Dichloroethylene	6352607		<0.02	<0.02	NA	< 0.02	94%	50%	140%	95%	60%	130%	95%	50%	140%
Chloroform	6352607		<0.04	<0.04	NA	< 0.04	94%	50%	140%	88%	60%	130%	102%	50%	140%
1,2-Dichloroethane	6352607		<0.03	<0.03	NA	< 0.03	107%	50%	140%	101%	60%	130%	106%	50%	140%
1,1,1-Trichloroethane	6352607		<0.05	<0.05	NA	< 0.05	100%	50%	140%	97%	60%	130%	84%	50%	140%
Carbon Tetrachloride	6352607		<0.05	<0.05	NA	< 0.05	89%	50%	140%	105%	60%	130%	96%	50%	140%
Benzene	6352607		<0.02	<0.02	NA	< 0.02	97%	50%	140%	89%	60%	130%	89%	50%	140%
1,2-Dichloropropane	6352607		<0.03	<0.03	NA	< 0.03	96%	50%	140%	96%	60%	130%	100%	50%	140%
Trichloroethylene	6352607		<0.03	<0.03	NA	< 0.03	106%	50%	140%	104%	60%	130%	98%	50%	140%
Bromodichloromethane	6352607		<0.05	<0.05	NA	< 0.05	98%	50%	140%	95%	60%	130%	103%	50%	140%
Methyl Isobutyl Ketone	6352607		<0.50	<0.50	NA	< 0.50	131%	50%	140%	85%	50%	140%	82%	50%	140%
1,1,2-Trichloroethane	6352607		<0.04	<0.04	NA	< 0.04	89%	50%	140%	96%	60%	130%	84%	50%	140%
Toluene	6352607		<0.05	<0.05	NA	< 0.05	92%	50%	140%	105%	60%	130%	99%	50%	140%
Dibromochloromethane	6352607		<0.05	<0.05	NA	< 0.05	88%	50%	140%	82%	60%	130%	78%	50%	140%
Ethylene Dibromide	6352607		<0.04	<0.04	NA	< 0.04	90%	50%	140%	81%	60%	130%	91%	50%	140%
Tetrachloroethylene	6352607		<0.05	<0.05	NA	< 0.05	88%	50%	140%	90%	60%	130%	87%	50%	140%
1,1,1,2-Tetrachloroethane	6352607		<0.04	<0.04	NA	< 0.04	92%	50%	140%	114%	60%	130%	103%	50%	140%
Chlorobenzene	6352607		<0.05	<0.05	NA	< 0.05	99%	50%	140%	107%	60%	130%	100%	50%	140%
Ethylbenzene	6352607		<0.05	<0.05	NA	< 0.05	100%	50%	140%	96%	60%	130%	95%	50%	140%
m & p-Xylene	6352607		<0.05	<0.05	NA	< 0.05	88%	50%	140%	92%	60%	130%	89%	50%	140%
Bromoform	6352607		<0.05	<0.05	NA	< 0.05	98%	50%	140%	61%	60%	130%	61%	50%	140%
Styrene	6352607		<0.05	<0.05	NA	< 0.05	79%	50%	140%	80%	60%	130%	69%	50%	140%
1,1,2,2-Tetrachloroethane	6352607		<0.05	<0.05	NA	< 0.05	75%	50%	140%	104%	60%	130%	85%	50%	140%
o-Xylene	6352607		<0.05	<0.05	NA	< 0.05	91%	50%	140%	92%	60%	130%	87%	50%	140%

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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H224669

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Nov 28, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	6352607		<0.05	<0.05	NA	< 0.05	84%	50%	140%	92%	60%	130%	87%	50%	140%
1,4-Dichlorobenzene	6352607		<0.05	<0.05	NA	< 0.05	89%	50%	140%	93%	60%	130%	86%	50%	140%
1,2-Dichlorobenzene	6352607		<0.05	<0.05	NA	< 0.05	92%	50%	140%	91%	60%	130%	89%	50%	140%
n-Hexane	6352607		<0.05	<0.05	NA	< 0.05	92%	50%	140%	91%	60%	130%	84%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: N Popnikolof

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CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H224669

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

RPT Date: Nov 28, 2024

PARAMETER	Sample Id	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)										
Antimony		135%	70%	130%	83%	80%	120%	79%	70%	130%

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

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Method Summary

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AGAT WORK ORDER: 24H224669

PROJECT: NS2484-02

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SAMPLING SITE:

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl2 Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE

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Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H224669

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Hexachloroethane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Aldrin	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endosulfan I	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endosulfan II	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	CALCULATION
Alpha-Chlordane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
gamma-Chlordane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Chlordane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	CALCULATION
op'-DDE	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
pp'-DDE	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
DDE	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
op'-DDD	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
pp'-DDD	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
DDD	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	CALCULATION
op'-DDT	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
pp'-DDT	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
DDT (Total)	ORG-91-5113	modified from EPA 3570, 3620C & 8081B	CALCULATION
Dieldrin	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endrin	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
TCMX	ORG-91-5112	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE

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Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H224669

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
wet weight OC	ORG-91-5113		BALANCE
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

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Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: NSSL
Contact: Jodie Glaser
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Phone: 289-407-6341 Fax:
Reports to be sent to:
1. Email: Jglaser@nssl.ca
2. Email:

Project Information:

Project: NS2484-02
Site Location:
Sampled By:
AGAT Quote #: 103365 9EB PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 — Table 3 (Indicate One) — ☐ Ind/Com ☒ Res/Park ☐ Agriculture
Soil Texture (Check One): ☐ Coarse ☒ Fine

☐ Regulation 406 — Table (Indicate One) — ☐ Ind/Com ☐ Res/Park ☐ Agriculture

☐ Regulation 558

☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm — Region

☐ Prov. Water Quality Objectives (PWQO)

☐ Other — Indicate One

Is this submission for a **Record of Site Condition (RSC)?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Legal Sample ☐

Sample Matrix Legend

GW	Ground Water	**SD**	Sediment
O	Oil	**SW**	Surface Water
P	Paint	**R**	Rock/Shale
S	Soil		

Laboratory Use Only

Work Order #: 24H224669
Cooler Quantity: 4
Arrival Temperatures: 5.2 | 5.4 | 5.6
Depot Temperatures: 6.0 | 5.8 | 5.4
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: ICE PKS

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CSR

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 PHCs	VOC / PHCs	PAHs	PCBs: Aroclors ☐	O. Reg 406: Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	EC, SAR	Regulation 406 SPLP Rainwater Leach mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide	OCs							Potentially Hazardous or High Concentration (Y/N)
1. BH1-2	11-[illegible]22	AM/PM	3	S			X			X	X							X						
2. BH2-1	↓	AM/PM	3	↓			X			X	X													
3. BH3-1		AM/PM	3				X			X	X													
4. BH3-2		AM/PM	3				X			X	X													
5. BH4-1		AM/PM	3				Y			X	X							X						
6. BH5-1		AM/PM	1															X						
7. HA-1		AM/PM	1															X						
8. HA-2		AM/PM	1															X						
9. HA-3		AM/PM	1															X						
10. HA-4	↓	AM/PM	1	↓														X						
11.		AM/PM																						

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Damen Myland	11-25		DTM	NOV 25/24	1:10pm
DTM	NOV 25/24	3pm	[illegible]	NOV 25/24	4pm

Page ____ of ____

N°: T-163974

Pink Copy - Client I Yellow Copy - AGAT I White Copy - AGAT

AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
3300 MERRITTVILLE HIGHWAY
THOROLD, ON L2V 4Y6
289-407-6341

ATTENTION TO: Jodie Glasier

PROJECT: NS2484-02

AGAT WORK ORDER: 24H227328

SOIL ANALYSIS REVIEWED BY: Sukhwinder Randhawa, Inorganic Team Lead

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Dec 09, 2024

PAGES (INCLUDING COVER): 8

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
- *Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.*
- *All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.*

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Certificate of Analysis

AGAT WORK ORDER: 24H227328

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:4336 Willich Road

SAMPLED BY:J. Toldi

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

DATE RECEIVED: 2024-12-02 **DATE REPORTED: 2024-12-09**

		SAMPLE DESCRIPTION:		BH1-2-A	BH1-2-B	BH1-2-C	BH1-2-D
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-11-29	2024-11-29	2024-11-29	2024-11-29
Parameter	Unit	G / S	RDL	6372596	6372598	6372599	6372600
Cobalt	µg/g	22	0.8	5.6	5.0	7.8	7.1

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T2 S RPI MFT
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 24H227328

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:4336 Willich Road

SAMPLED BY:J. Toldi

O. Reg. 153(511) - PHCs F2 - F4 (Soil)

DATE RECEIVED: 2024-12-02 **DATE REPORTED: 2024-12-09**

		SAMPLE DESCRIPTION:		BH4-2	BH4-1-A	BH4-1-B	BH4-1-C	BH4-1-D
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-11-29	2024-11-29	2024-11-29	2024-11-29	2024-11-29
Parameter	**Unit**	**G / S**	**RDL**	**6372591**	**6372592**	**6372593**	**6372594**	**6372595**
F3 (C16 to C34)	µg/g	1300	50	<50	870	208	**2660**	126
Gravimetric Heavy Hydrocarbons	µg/g	5600	50	NA	NA	NA	NA	NA
Moisture Content	%		0.1	13.8	2.8	8.3	18.3	9.0
Surrogate	**Unit**	**Acceptable Limits**						
Terphenyl	%	60-140		120	140	110	90	97

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T2 S RPI MFT
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6372591-6372595 Results are based on sample dry weight.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowich

AGAT Laboratories

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Exceedance Summary

AGAT WORK ORDER: 24H227328

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
6372594	BH4-1-C	ON T2 S RPI MFT	O. Reg. 153(511) - PHCs F2 - F4 (Soil)	F3 (C16 to C34)	µg/g	1300	2660

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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H227328

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:4336 Willich Road

SAMPLED BY:J. Toldi

Soil Analysis

RPT Date: Dec 09, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Soil)															
Cobalt	6370802		5.8	6.4	9.8%	< 0.8	90%	70%	130%	105%	80%	120%	113%	70%	130%

Comments: NA Signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By:

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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H227328

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:4336 Willich Road

SAMPLED BY:J. Toldi

Trace Organics Analysis

RPT Date: Dec 09, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F2 - F4 (Soil)															
F3 (C16 to C34)	6371055		< 50	< 50	NA	< 50	116%	60%	140%	120%	60%	140%	114%	60%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: N Popnikolof

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Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H227328

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:4336 Willich Road

SAMPLED BY:J. Toldi

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Trace Organics Analysis			
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID

AGAT Laboratories

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Mississauga, Ontario L4Z 1Y2
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webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Laboratory Use Only

Work Order #: 24H227328

Cooler Quantity: LG 1L

Arrival Temperatures: 8.3 | 8.5 | 8.7

Depot Temperatures: 9.6 | 9.8 | 10.0

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: ICE PKS $11

Report Information:

Company: NSSL

Contact: Jodie Glaster

Address: 3300 Merritville Highway, Unit 4
Thorold, ON L2V 4Y6

Phone: 289-407-6341 Fax:

Reports to be sent to:

1. Email: Jglaser@nssl.ca
2. Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 — Table 3 (Indicate One) — ☐ Ind/Com ☒ Res/Park ☐ Agriculture

Soil Texture (Check One) ☐ Coarse ☒ Fine

☐ Regulation 406 — Table (Indicate One) — ☐ Ind/Com ☐ Res/Park ☐ Agriculture

☐ Regulation 558

☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm — Region

☐ Prov. Water Quality Objectives (PWQO)

☐ Other — Indicate One

Is this submission for a **Record of Site Condition (RSC)**? ☐ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT

**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CSR

Project Information:

Project: NS2484-02

Site Location: 4336 Willick Road

Sampled By: J. Toldi

AGAT Quote #: 103365912B PO:

Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:

Contact:

Address:

Email:

Legal Sample ☐

Sample Matrix Legend

GW	Ground Water	**SD**	Sediment
O	Oil	**SW**	Surface Water
P	Paint	**R**	Rock/Shale
S	Soil		

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	VOC	PAHs	PCBs: Aroclors ☐	O. Reg 406: Regulation 406 Characterization Package	O. Reg 406: pH, Metals, BTEX, F1-F4	O. Reg 406: EC, SAR	O. Reg 406: Regulation 406 SPLP Rainwater Leach mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC	O. Reg 558: Landfill Disposal Characterization TCLP: TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide	F3 (C16 to C34)	Cobalt						Potentially Hazardous or High Concentration (Y/N)
1. BH4-2	11/29/24	AM PM	1	S														X	X						
2. BH4-1-A	↓	AM PM	↓	↓														X	X						
3. BH4-1-B		AM PM																X	X						
4. BH4-1-C		AM PM																X	X						
5. BH4-1-D		AM PM																X	X						
6. BH1-2-A		AM PM																		X					
7. BH1-2-B		AM PM																		X					
8. BH1-2-C		AM PM																		X					
9. BH1-2-D	↓	AM PM	↓	↓																X					
10.		AM PM																							
11.		AM PM																							

Samples Relinquished By (Print Name and Sign): Jacob Toldi	Date 11/29/24	Time 4:10 PM	Samples Received By (Print Name and Sign): DMC	Date NOV 29/24	Time 4:10PM		
Samples Relinquished By (Print Name and Sign): DMC	Date 12/2/24	Time 3PM	Samples Received By (Print Name and Sign): DAWN	Date 12/02/24	Time 3:50	Page 1 of 1	
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time	N°: T-161693	

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

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CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
3300 MERRITTVILLE HIGHWAY
THOROLD, ON L2V 4Y6
289-407-6341

ATTENTION TO: Jodie Glasier

PROJECT: NS2484-02

AGAT WORK ORDER: 24H228861

SOIL ANALYSIS REVIEWED BY: Sukhwinder Randhawa, Inorganic Team Lead

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

DATE REPORTED: Dec 11, 2024

PAGES (INCLUDING COVER): 16

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Disclaimer:

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- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
- *Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.*
- *All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.*
- *This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.*
- *For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.*

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Certificate of Analysis

AGAT WORK ORDER: 24H228861

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-12-05

DATE REPORTED: 2024-12-11

		SAMPLE DESCRIPTION:		BH1-1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2024-12-05
Parameter	Unit	G / S	RDL	6383635
Antimony	µg/g	7.5	0.8	2.0
Arsenic	µg/g	18	1	9
Barium	µg/g	390	2.0	95.2
Beryllium	µg/g	5	0.5	<0.5
Boron	µg/g	120	5	13
Boron (Hot Water Soluble)	µg/g	1.5	0.10	1.37
Cadmium	µg/g	1.2	0.5	0.6
Chromium	µg/g	160	5	21
Cobalt	µg/g	22	0.8	5.5
Copper	µg/g	180	1.0	41.2
Lead	µg/g	120	1	56
Molybdenum	µg/g	6.9	0.5	1.1
Nickel	µg/g	130	1	48
Selenium	µg/g	2.4	0.8	<0.8
Silver	µg/g	25	0.5	<0.5
Thallium	µg/g	1	0.5	<0.5
Uranium	µg/g	23	0.50	<0.50
Vanadium	µg/g	86	2.0	17.3
Zinc	µg/g	340	5	193
Chromium, Hexavalent	µg/g	10	0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.040	<0.040
Mercury	µg/g	1.8	0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.352
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	0.500
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	6.75

Certified By:

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 24H228861

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-12-05 **DATE REPORTED: 2024-12-11**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6383635 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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CANADA L4Z 1Y2
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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H228861

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2024-12-05

DATE REPORTED: 2024-12-11

		SAMPLE DESCRIPTION:		BH1-1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2024-12-05
Parameter	**Unit**	**G / S**	**RDL**	**6383635**
Naphthalene	µg/g	0.75	0.05	<0.05
Acenaphthylene	µg/g	0.17	0.05	<0.05
Acenaphthene	µg/g	29	0.05	<0.05
Fluorene	µg/g	69	0.05	<0.05
Phenanthrene	µg/g	7.8	0.05	<0.05
Anthracene	µg/g	0.74	0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05
Pyrene	µg/g	78	0.05	<0.05
Benzo(a)anthracene	µg/g	0.63	0.05	<0.05
Chrysene	µg/g	7.8	0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.48	0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05
Benzo(g,h,i)perylene	µg/g	7.8	0.05	<0.05
2-and 1-methyl Naphthalene	µg/g	3.4	0.05	<0.05
Moisture Content	%		0.1	15.6
Surrogate	**Unit**	**Acceptable Limits**		
Naphthalene-d8	%	50-140		100
Acridine-d9	%	50-140		100
Terphenyl-d14	%	50-140		75

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6383635 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

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Certificate of Analysis

AGAT WORK ORDER: 24H228861

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2024-12-05 **DATE REPORTED: 2024-12-11**

		SAMPLE DESCRIPTION:		BH1-1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2024-12-05
Parameter	**Unit**	**G / S**	**RDL**	**6383635**
F1 (C6 to C10)	µg/g	65	5	<5
F1 (C6 to C10) minus BTEX	µg/g	65	5	<5
F2 (C10 to C16)	µg/g	150	10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10
F3 (C16 to C34)	µg/g	1300	50	446
F3 (C16 to C34) minus PAHs	µg/g		50	446
F4 (C34 to C50)	µg/g	5600	50	454
Gravimetric Heavy Hydrocarbons	µg/g	5600	50	NA
Moisture Content	%		0.1	15.6
Surrogate	**Unit**	**Acceptable Limits**		
Toluene-d8	%	50-140		93
Terphenyl	%	60-140		100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6383635 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Jinkal Patel

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Certificate of Analysis

AGAT WORK ORDER: 24H228861

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-12-05

DATE REPORTED: 2024-12-11

		SAMPLE DESCRIPTION:		BH1-1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2024-12-05
Parameter	Unit	G / S	RDL	6383635
Dichlorodifluoromethane	µg/g	25	0.05	<0.05
Vinyl Chloride	ug/g	0.022	0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05
Trichlorofluoromethane	ug/g	5.8	0.05	<0.05
Acetone	ug/g	28	0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05
Methylene Chloride	ug/g	0.96	0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.75	0.05	<0.05
Methyl tert-butyl Ether	ug/g	1.4	0.05	<0.05
1,1-Dichloroethane	ug/g	0.6	0.02	<0.02
Methyl Ethyl Ketone	ug/g	44	0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	2.5	0.02	<0.02
Chloroform	ug/g	0.18	0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03
1,1,1-Trichloroethane	ug/g	3.4	0.05	<0.05
Carbon Tetrachloride	ug/g	0.12	0.05	<0.05
Benzene	ug/g	0.17	0.02	<0.02
1,2-Dichloropropane	ug/g	0.085	0.03	<0.03
Trichloroethylene	ug/g	0.52	0.03	<0.03
Bromodichloromethane	ug/g	1.9	0.05	<0.05
Methyl Isobutyl Ketone	ug/g	4.3	0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04
Toluene	ug/g	6	0.05	<0.05
Dibromochloromethane	ug/g	2.9	0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04
Tetrachloroethylene	ug/g	2.3	0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.04	<0.04
Chlorobenzene	ug/g	2.7	0.05	<0.05
Ethylbenzene	ug/g	1.6	0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05

Certified By: Pinkal Patel

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Certificate of Analysis

AGAT WORK ORDER: 24H228861

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-12-05 **DATE REPORTED: 2024-12-11**

		SAMPLE DESCRIPTION:		BH1-1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2024-12-05
Parameter	**Unit**	**G / S**	**RDL**	**6383635**
Bromoform	ug/g	0.26	0.05	<0.05
Styrene	ug/g	2.2	0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05
o-Xylene	ug/g		0.05	<0.05
1,3-Dichlorobenzene	ug/g	6	0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.097	0.05	<0.05
1,2-Dichlorobenzene	ug/g	1.7	0.05	<0.05
Xylenes (Total)	ug/g	25	0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.081	0.05	<0.05
n-Hexane	µg/g	34	0.05	<0.05
Moisture Content	%		0.1	15.6
Surrogate	**Unit**	**Acceptable Limits**		
Toluene-d8	% Recovery	50-140		93
4-Bromofluorobenzene	% Recovery	50-140		84

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6383635 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H228861

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

Soil Analysis

RPT Date: Dec 11, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	6386567		<0.8	<0.8	NA	< 0.8	114%	70%	130%	85%	80%	120%	78%	70%	130%
Arsenic	6386567		7	7	0.0%	< 1	130%	70%	130%	103%	80%	120%	121%	70%	130%
Barium	6386567		25.8	21.7	17.3%	< 2.0	98%	70%	130%	100%	80%	120%	107%	70%	130%
Beryllium	6386567		<0.5	<0.5	NA	< 0.5	106%	70%	130%	115%	80%	120%	130%	70%	130%
Boron	6386567		8	8	NA	< 5	84%	70%	130%	97%	80%	120%	121%	70%	130%
Boron (Hot Water Soluble)	6386567		<0.10	<0.10	NA	< 0.10	108%	60%	140%	102%	70%	130%	101%	60%	140%
Cadmium	6386567		<0.5	<0.5	NA	< 0.5	99%	70%	130%	102%	80%	120%	114%	70%	130%
Chromium	6386567		8	8	NA	< 5	101%	70%	130%	100%	80%	120%	104%	70%	130%
Cobalt	6386567		5.5	5.4	1.8%	< 0.8	97%	70%	130%	91%	80%	120%	102%	70%	130%
Copper	6386567		24.1	23.9	0.8%	< 1.0	113%	70%	130%	102%	80%	120%	107%	70%	130%
Lead	6386567		17	17	0.0%	< 1	122%	70%	130%	104%	80%	120%	105%	70%	130%
Molybdenum	6386567		0.5	0.5	NA	< 0.5	107%	70%	130%	106%	80%	120%	126%	70%	130%
Nickel	6386567		13	13	0.0%	< 1	113%	70%	130%	106%	80%	120%	114%	70%	130%
Selenium	6386567		<0.8	<0.8	NA	< 0.8	60%	70%	130%	106%	80%	120%	121%	70%	130%
Silver	6386567		<0.5	<0.5	NA	< 0.5	102%	70%	130%	109%	80%	120%	107%	70%	130%
Thallium	6386567		<0.5	<0.5	NA	< 0.5	99%	70%	130%	117%	80%	120%	120%	70%	130%
Uranium	6386567		<0.50	<0.50	NA	< 0.50	88%	70%	130%	83%	80%	120%	90%	70%	130%
Vanadium	6386567		11.4	11.1	2.7%	< 2.0	126%	70%	130%	89%	80%	120%	114%	70%	130%
Zinc	6386567		70	69	1.4%	< 5	123%	70%	130%	117%	80%	120%	NA	70%	130%
Chromium, Hexavalent	6376315		<0.2	<0.2	NA	< 0.2	108%	70%	130%	98%	80%	120%	73%	70%	130%
Cyanide, WAD	6383635	6383635	<0.040	<0.040	NA	< 0.040	96%	70%	130%	93%	80%	120%	86%	70%	130%
Mercury	6386567		<0.10	<0.10	NA	< 0.10	97%	70%	130%	99%	80%	120%	94%	70%	130%
Electrical Conductivity (2:1)	6386567		0.106	0.103	2.9%	< 0.005	94%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	6386567		0.200	0.215	7.2%	NA	NA								
pH, 2:1 CaCl2 Extraction	6383635	6383635	6.75	6.91	2.3%	NA	99%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.

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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H228861

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Dec 11, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)															
F1 (C6 to C10)	6378831		<5	<5	NA	< 5	91%	60%	140%	95%	60%	140%	87%	60%	140%
F2 (C10 to C16)	6378512		< 10	< 10	NA	< 10	115%	60%	140%	98%	60%	140%	85%	60%	140%
F3 (C16 to C34)	6378512		< 50	< 50	NA	< 50	113%	60%	140%	113%	60%	140%	101%	60%	140%
F4 (C34 to C50)	6378512		< 50	< 50	NA	< 50	71%	60%	140%	84%	60%	140%	81%	60%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	6380734		<0.05	<0.05	NA	< 0.05	94%	50%	140%	100%	50%	140%	95%	50%	140%
Acenaphthylene	6380734		<0.05	<0.05	NA	< 0.05	86%	50%	140%	108%	50%	140%	88%	50%	140%
Acenaphthene	6380734		<0.05	<0.05	NA	< 0.05	84%	50%	140%	83%	50%	140%	85%	50%	140%
Fluorene	6380734		<0.05	<0.05	NA	< 0.05	84%	50%	140%	93%	50%	140%	93%	50%	140%
Phenanthrene	6380734		<0.05	<0.05	NA	< 0.05	73%	50%	140%	113%	50%	140%	110%	50%	140%
Anthracene	6380734		<0.05	<0.05	NA	< 0.05	78%	50%	140%	108%	50%	140%	95%	50%	140%
Fluoranthene	6380734		<0.05	<0.05	NA	< 0.05	87%	50%	140%	93%	50%	140%	108%	50%	140%
Pyrene	6380734		<0.05	<0.05	NA	< 0.05	85%	50%	140%	100%	50%	140%	95%	50%	140%
Benzo(a)anthracene	6380734		<0.05	<0.05	NA	< 0.05	104%	50%	140%	85%	50%	140%	105%	50%	140%
Chrysene	6380734		<0.05	<0.05	NA	< 0.05	106%	50%	140%	93%	50%	140%	85%	50%	140%
Benzo(b)fluoranthene	6380734		<0.05	<0.05	NA	< 0.05	82%	50%	140%	88%	50%	140%	75%	50%	140%
Benzo(k)fluoranthene	6380734		<0.05	<0.05	NA	< 0.05	103%	50%	140%	90%	50%	140%	83%	50%	140%
Benzo(a)pyrene	6380734		<0.05	<0.05	NA	< 0.05	96%	50%	140%	113%	50%	140%	75%	50%	140%
Indeno(1,2,3-cd)pyrene	6380734		<0.05	<0.05	NA	< 0.05	74%	50%	140%	58%	50%	140%	88%	50%	140%
Dibenz(a,h)anthracene	6380734		<0.05	<0.05	NA	< 0.05	83%	50%	140%	93%	50%	140%	100%	50%	140%
Benzo(g,h,i)perylene	6380734		<0.05	<0.05	NA	< 0.05	117%	50%	140%	103%	50%	140%	85%	50%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	6378831		<0.05	<0.05	NA	< 0.05	103%	50%	140%	105%	50%	140%	137%	50%	140%
Vinyl Chloride	6378831		<0.02	<0.02	NA	< 0.02	73%	50%	140%	109%	50%	140%	128%	50%	140%
Bromomethane	6378831		<0.05	<0.05	NA	< 0.05	101%	50%	140%	116%	50%	140%	129%	50%	140%
Trichlorofluoromethane	6378831		<0.05	<0.05	NA	< 0.05	90%	50%	140%	107%	50%	140%	124%	50%	140%
Acetone	6378831		<0.50	<0.50	NA	< 0.50	89%	50%	140%	94%	50%	140%	126%	50%	140%
1,1-Dichloroethylene	6378831		<0.05	<0.05	NA	< 0.05	88%	50%	140%	89%	60%	130%	94%	50%	140%
Methylene Chloride	6378831		<0.05	<0.05	NA	< 0.05	76%	50%	140%	89%	60%	130%	100%	50%	140%
Trans- 1,2-Dichloroethylene	6378831		<0.05	<0.05	NA	< 0.05	72%	50%	140%	84%	60%	130%	92%	50%	140%
Methyl tert-butyl Ether	6378831		<0.05	<0.05	NA	< 0.05	78%	50%	140%	113%	60%	130%	107%	50%	140%
1,1-Dichloroethane	6378831		<0.02	<0.02	NA	< 0.02	83%	50%	140%	95%	60%	130%	105%	50%	140%
Methyl Ethyl Ketone	6378831		<0.50	<0.50	NA	< 0.50	115%	50%	140%	101%	50%	140%	110%	50%	140%
Cis- 1,2-Dichloroethylene	6378831		<0.02	<0.02	NA	< 0.02	86%	50%	140%	70%	60%	130%	66%	50%	140%
Chloroform	6378831		<0.04	<0.04	NA	< 0.04	87%	50%	140%	95%	60%	130%	84%	50%	140%
1,2-Dichloroethane	6378831		<0.03	<0.03	NA	< 0.03	94%	50%	140%	100%	60%	130%	87%	50%	140%
1,1,1-Trichloroethane	6378831		<0.05	<0.05	NA	< 0.05	95%	50%	140%	77%	60%	130%	96%	50%	140%
Carbon Tetrachloride	6378831		<0.05	<0.05	NA	< 0.05	84%	50%	140%	70%	60%	130%	82%	50%	140%

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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H228861

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Dec 11, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Benzene	6378831		<0.02	<0.02	NA	< 0.02	94%	50%	140%	87%	60%	130%	72%	50%	140%
1,2-Dichloropropane	6378831		<0.03	<0.03	NA	< 0.03	100%	50%	140%	90%	60%	130%	86%	50%	140%
Trichloroethylene	6378831		<0.03	<0.03	NA	< 0.03	104%	50%	140%	64%	60%	130%	73%	50%	140%
Bromodichloromethane	6378831		<0.05	<0.05	NA	< 0.05	105%	50%	140%	89%	60%	130%	71%	50%	140%
Methyl Isobutyl Ketone	6378831		<0.50	<0.50	NA	< 0.50	100%	50%	140%	115%	50%	140%	126%	50%	140%
1,1,2-Trichloroethane	6378831		<0.04	<0.04	NA	< 0.04	114%	50%	140%	88%	60%	130%	104%	50%	140%
Toluene	6378831		<0.05	<0.05	NA	< 0.05	106%	50%	140%	97%	60%	130%	91%	50%	140%
Dibromochloromethane	6378831		<0.05	<0.05	NA	< 0.05	93%	50%	140%	69%	60%	130%	73%	50%	140%
Ethylene Dibromide	6378831		<0.04	<0.04	NA	< 0.04	106%	50%	140%	78%	60%	130%	92%	50%	140%
Tetrachloroethylene	6378831		<0.05	<0.05	NA	< 0.05	89%	50%	140%	99%	60%	130%	78%	50%	140%
1,1,1,2-Tetrachloroethane	6378831		<0.04	<0.04	NA	< 0.04	84%	50%	140%	66%	60%	130%	65%	50%	140%
Chlorobenzene	6378831		<0.05	<0.05	NA	< 0.05	104%	50%	140%	84%	60%	130%	84%	50%	140%
Ethylbenzene	6378831		<0.05	<0.05	NA	< 0.05	104%	50%	140%	94%	60%	130%	90%	50%	140%
m & p-Xylene	6378831		<0.05	<0.05	NA	< 0.05	106%	50%	140%	94%	60%	130%	90%	50%	140%
Bromoform	6378831		<0.05	<0.05	NA	< 0.05	70%	50%	140%	63%	60%	130%	64%	50%	140%
Styrene	6378831		<0.05	<0.05	NA	< 0.05	101%	50%	140%	79%	60%	130%	78%	50%	140%
1,1,2,2-Tetrachloroethane	6378831		<0.05	<0.05	NA	< 0.05	110%	50%	140%	97%	60%	130%	107%	50%	140%
o-Xylene	6378831		<0.05	<0.05	NA	< 0.05	98%	50%	140%	95%	60%	130%	99%	50%	140%
1,3-Dichlorobenzene	6378831		<0.05	<0.05	NA	< 0.05	97%	50%	140%	72%	60%	130%	77%	50%	140%
1,4-Dichlorobenzene	6378831		<0.05	<0.05	NA	< 0.05	94%	50%	140%	77%	60%	130%	74%	50%	140%
1,2-Dichlorobenzene	6378831		<0.05	<0.05	NA	< 0.05	98%	50%	140%	74%	60%	130%	72%	50%	140%
n-Hexane	6378831		<0.05	<0.05	NA	< 0.05	81%	50%	140%	88%	60%	130%	96%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By:

AGAT Laboratories

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QC Exceedance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H228861

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

RPT Date: Dec 11, 2024		REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Sample Id	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)										
Selenium		60%	70%	130%	106%	80%	120%	121%	70%	130%

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.

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Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H228861

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl2 Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE

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Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H228861

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H228861

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H228861

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

AGAT Laboratories

Have feedback? Scan here for a quick survey!

5835 Coopers Avenue
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5.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: NSSL
Contact: Jodie Glaser
Address: 3300 Merritville Hwy Unit 4
Thorold, ON L2V 4Y6
Phone: 289-407-6341 Fax:
Reports to be sent to:
1. Email: Jglaser@nssl.ca
2. Email:

Project Information:

Project: NS2484-02
Site Location:
Sampled By:
AGAT Quote #: 1033659 ED PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 2 (Indicate One)
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture (Check One)
☐ Coarse
☒ Fine

☐ Regulation 406
Table ____ (Indicate One)
☐ Ind/Com
☐ Res/Park
☐ Agriculture
☐ Regulation 558
☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
Region
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
Indicate One

Is this submission for a **Record of Site Condition (RSC)**? ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Legal Sample ☐

Sample Matrix Legend

GW	Ground Water	**SD**	Sediment
O	Oil	**SW**	Surface Water
P	Paint	**R**	Rock/Shale
S	Soil		

Laboratory Use Only

Work Order #: 24H228861
Cooler Quantity: LG COOLER
Arrival Temperatures:
Depot Temperatures: 2.8 | 13.0 | 13.8
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: ICE PKS

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply): 4 day turn around
Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*
For 'Same Day' analysis, please contact your AGAT CSR

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	VOC	PAHs	PCBs: Aroclors ☐	O. Reg 406: Regulation 406 Characterization Package	O. Reg 406: pH, Metals, BTEX, F1-F4	O. Reg 406: EC, SAR	O. Reg 406: Regulation 406 SPLP Rainwater Leach	O. Reg 406: mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 558: TCLP:	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. BH1-1	12-5	PM	3	S			X		X	X	X										
2.		AM PM																			
3.		AM PM																			
4.		AM PM																			
5.		AM PM																			
6.		AM PM																			
7.		AM PM																			
8.		AM PM																			
9.		AM PM																			
10.		AM PM																			
11.		AM PM																			

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Damen Nyland	12-5	1:30 pm	TAIC	Dec 5/24	1:25 pm
RTAIC	Dec 5/24	3pm	TAIC	Dec 5	3:45

Page ____ of ____
No: T-164262

APPENDIX C

CERTIFICATES OF ANALYSIS - GROUNDWATER

AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
3300 MERRITTVILLE HIGHWAY
THOROLD, ON L2V 4Y6
289-407-6341

ATTENTION TO: Jodie Glasier

PROJECT: NS2484-025

AGAT WORK ORDER: 24H228860

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganic Team Lead

DATE REPORTED: Dec 11, 2024

PAGES (INCLUDING COVER): 17

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
- *Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.*
- *All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.*
- *This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.*
- *For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.*

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 24H228860

PROJECT: NS2484-025

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PAHs (Water)

DATE RECEIVED: 2024-12-05

DATE REPORTED: 2024-12-11

		SAMPLE DESCRIPTION:		MW1	MW2	MW3	DUP
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2024-12-05	2024-12-05	2024-12-05	2024-12-05
Parameter	**Unit**	**G / S**	**RDL**	**6383589**	**6383619**	**6383620**	**6383621**
Naphthalene	µg/L	11	0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	4.1	0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	120	0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	1	0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	2.4	0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	0.41	0.20	<0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	4.1	0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	1	0.20	<0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	0.1	0.10	<0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.01	0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20
2-and 1-methyl Napthalene	µg/L	3.2	0.20	<0.20	<0.20	<0.20	<0.20
Sediment				1	1	1	1
Surrogate	**Unit**	**Acceptable Limits**					
Naphthalene-d8	%	50-140		114	121	124	137
Acridine-d9	%	50-140		105	118	119	135
Terphenyl-d14	%	50-140		106	129	135	107

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6383589-6383621 Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amount
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

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Certificate of Analysis

AGAT WORK ORDER: 24H228860

PROJECT: NS2484-025

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2024-12-05 **DATE REPORTED: 2024-12-11**

		SAMPLE DESCRIPTION:		MW1	MW2	MW3	DUP
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2024-12-05	2024-12-05	2024-12-05	2024-12-05
Parameter	**Unit**	**G / S**	**RDL**	**6383589**	**6383619**	**6383620**	**6383621**
F1 (C6 to C10)	µg/L	750	25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	150	<100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	150	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	NA	NA
Sediment				1	1	1	1
Surrogate	**Unit**	**Acceptable Limits**					
Toluene-d8	%	50-140		95	89	98	99
Terphenyl	% Recovery	60-140		91	64	66	76

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AGAT WORK ORDER: 24H228860

PROJECT: NS2484-025

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2024-12-05 **DATE REPORTED: 2024-12-11**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6383589 The F2 result is due to the presence of one individual unidentified compounds.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

6383619-6383621 The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Jinkal Patel

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Certificate of Analysis

AGAT WORK ORDER: 24H228860

PROJECT: NS2484-025

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2024-12-05

DATE REPORTED: 2024-12-11

		SAMPLE DESCRIPTION:		MW1	MW2	MW3	DUP
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2024-12-05	2024-12-05	2024-12-05	2024-12-05
Parameter	Unit	G / S	RDL	6383589	6383619	6383620	6383621
Dichlorodifluoromethane	µg/L	590	0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	1.7	0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	14	0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	50	0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	5	0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	1800	1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	22	0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	200	0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	5.0	0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	5.0	0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	16	0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	24	0.20	0.89	0.62	<0.20	<0.20
Dibromochloromethane	µg/L	25	0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	30	0.10	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	2.4	0.10	<0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20

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Certificate of Analysis

AGAT WORK ORDER: 24H228860

PROJECT: NS2484-025

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2024-12-05 **DATE REPORTED: 2024-12-11**

		SAMPLE DESCRIPTION:		MW1	MW2	MW3	DUP
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2024-12-05	2024-12-05	2024-12-05	2024-12-05
Parameter	**Unit**	**G / S**	**RDL**	**6383589**	**6383619**	**6383620**	**6383621**
Bromoform	µg/L	25	0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	5.4	0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	1	0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	59	0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	1	0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	3	0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	300	0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	520	0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**					
Toluene-d8	% Recovery	50-140		95	89	98	99
4-Bromofluorobenzene	% Recovery	50-140		94	102	96	93

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6383589-6383621 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

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Certificate of Analysis

AGAT WORK ORDER: 24H228860

PROJECT: NS2484-025

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals & Inorganics (Water)

DATE RECEIVED: 2024-12-05

DATE REPORTED: 2024-12-11

		SAMPLE DESCRIPTION:		MW1		MW2		MW3	DUP
		SAMPLE TYPE:		Water		Water		Water	Water
		DATE SAMPLED:		2024-12-05		2024-12-05		2024-12-05	2024-12-05
Parameter	Unit	G / S	RDL	6383589	RDL	6383619	RDL	6383620	6383621
Dissolved Antimony	µg/L	6	1.0	<1.0	1.0	<1.0	1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	25	1.0	2.6	1.0	1.2	1.0	1.63	2.6
Dissolved Barium	µg/L	1000	2.0	21.9	2.0	71.3	2.0	91.1	91.4
Dissolved Beryllium	µg/L	4	0.50	<0.50	0.50	<0.50	0.50	<0.50	<0.50
Dissolved Boron	µg/L	5000	10.0	412	10.0	256	10.0	348	338
Dissolved Cadmium	µg/L	2.7	0.20	1.89	0.20	<0.20	0.20	<0.20	<0.20
Dissolved Chromium	µg/L	50	2.0	<2.0	2.0	<2.0	2.0	<2.0	<2.0
Dissolved Cobalt	µg/L	3.8	0.50	**185**	0.50	0.64	0.50	1.61	2.06
Dissolved Copper	µg/L	87	1.0	3.8	1.0	1.6	1.0	3.0	3.7
Dissolved Lead	µg/L	10	0.50	0.74	0.50	0.53	0.50	0.78	0.72
Dissolved Molybdenum	µg/L	70	0.50	5.70	0.50	8.40	0.50	4.49	3.66
Dissolved Nickel	µg/L	100	1.0	**149**	1.0	3.0	1.0	9.1	12.9
Dissolved Selenium	µg/L	10	1.0	<1.0	1.0	<1.0	1.0	<1.0	<1.0
Dissolved Silver	µg/L	1.5	0.20	<0.20	0.20	<0.20	0.20	<0.20	<0.20
Dissolved Thallium	µg/L	2	0.30	<0.30	0.30	<0.30	0.30	<0.30	<0.30
Dissolved Uranium	µg/L	20	0.50	**31.2**	0.50	12.9	0.50	**27.5**	**25.4**
Dissolved Vanadium	µg/L	6.2	0.40	<0.40	0.40	2.52	0.40	1.69	0.65
Dissolved Zinc	µg/L	1100	5.0	72.8	5.0	<5.0	5.0	6.2	<5.0
Mercury	µg/L	1	0.02	<0.02	0.02	<0.02	0.02	<0.02	<0.02
Chromium VI	µg/L	25	2.000	2.74	2.000	<2.000	2.000	<2.000	<2.000
Cyanide, WAD	µg/L	66	2	<2	2	<2	2	<2	<2
Dissolved Sodium	µg/L	490000	500	**687000**	50	199000	500	**544000**	**541000**
Chloride	µg/L	790000	244	**1340000**	100	356000	122	**1010000**	**1050000**
Electrical Conductivity	uS/cm	NA	2	7290	2	2800	2	6070	6070
pH	pH Units		NA	7.47	NA	7.76	NA	7.58	7.60

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Certificate of Analysis

AGAT WORK ORDER: 24H228860

PROJECT: NS2484-025

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals & Inorganics (Water)

DATE RECEIVED: 2024-12-05 **DATE REPORTED: 2024-12-11**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6383589-6383621 Metals analysis completed on a filtered sample.
pH is a recommended field analysis taken within 15 minutes of sample collection. Due to the potential for rapid change in sample equilibrium chemistry laboratory results may differ from field measured results

Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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Exceedance Summary

AGAT WORK ORDER: 24H228860

PROJECT: NS2484-025

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
6383589	MW1	ON T2 PGW MFT	O. Reg. 153(511) - Metals & Inorganics (Water)	Chloride	µg/L	790000	1340000
6383589	MW1	ON T2 PGW MFT	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Cobalt	µg/L	3.8	185
6383589	MW1	ON T2 PGW MFT	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Nickel	µg/L	100	149
6383589	MW1	ON T2 PGW MFT	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Sodium	µg/L	490000	687000
6383589	MW1	ON T2 PGW MFT	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Uranium	µg/L	20	31.2
6383620	MW3	ON T2 PGW MFT	O. Reg. 153(511) - Metals & Inorganics (Water)	Chloride	µg/L	790000	1010000
6383620	MW3	ON T2 PGW MFT	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Sodium	µg/L	490000	544000
6383620	MW3	ON T2 PGW MFT	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Uranium	µg/L	20	27.5
6383621	DUP	ON T2 PGW MFT	O. Reg. 153(511) - Metals & Inorganics (Water)	Chloride	µg/L	790000	1050000
6383621	DUP	ON T2 PGW MFT	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Sodium	µg/L	490000	541000
6383621	DUP	ON T2 PGW MFT	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Uranium	µg/L	20	25.4

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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H228860

PROJECT: NS2484-025

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Dec 11, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PAHs (Water)															
Naphthalene	6383805		<0.20	<0.20	NA	< 0.20	91%	50%	140%	73%	50%	140%	94%	50%	140%
Acenaphthylene	6383805		<0.20	<0.20	NA	< 0.20	92%	50%	140%	73%	50%	140%	93%	50%	140%
Acenaphthene	6383805		<0.20	<0.20	NA	< 0.20	91%	50%	140%	79%	50%	140%	102%	50%	140%
Fluorene	6383805		<0.20	<0.20	NA	< 0.20	97%	50%	140%	83%	50%	140%	106%	50%	140%
Phenanthrene	6383805		<0.10	<0.10	NA	< 0.10	101%	50%	140%	87%	50%	140%	114%	50%	140%
Anthracene	6383805		<0.10	<0.10	NA	< 0.10	77%	50%	140%	81%	50%	140%	108%	50%	140%
Fluoranthene	6383805		<0.20	<0.20	NA	< 0.20	106%	50%	140%	88%	50%	140%	111%	50%	140%
Pyrene	6383805		<0.20	<0.20	NA	< 0.20	107%	50%	140%	89%	50%	140%	110%	50%	140%
Benzo(a)anthracene	6383805		<0.20	<0.20	NA	< 0.20	97%	50%	140%	75%	50%	140%	89%	50%	140%
Chrysene	6383805		<0.10	<0.10	NA	< 0.10	104%	50%	140%	72%	50%	140%	106%	50%	140%
Benzo(b)fluoranthene	6383805		<0.10	<0.10	NA	< 0.10	97%	50%	140%	88%	50%	140%	86%	50%	140%
Benzo(k)fluoranthene	6383805		<0.10	<0.10	NA	< 0.10	104%	50%	140%	97%	50%	140%	98%	50%	140%
Benzo(a)pyrene	6383805		<0.01	<0.01	NA	< 0.01	87%	50%	140%	84%	50%	140%	84%	50%	140%
Indeno(1,2,3-cd)pyrene	6383805		<0.20	<0.20	NA	< 0.20	86%	50%	140%	79%	50%	140%	82%	50%	140%
Dibenz(a,h)anthracene	6383805		<0.20	<0.20	NA	< 0.20	88%	50%	140%	74%	50%	140%	80%	50%	140%
Benzo(g,h,i)perylene	6383805		<0.20	<0.20	NA	< 0.20	90%	50%	140%	79%	50%	140%	89%	50%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	6376676		<0.40	<0.40	NA	< 0.40	65%	50%	140%	67%	50%	140%	87%	50%	140%
Vinyl Chloride	6376676		<0.17	<0.17	NA	< 0.17	73%	50%	140%	103%	50%	140%	82%	50%	140%
Bromomethane	6376676		<0.20	<0.20	NA	< 0.20	97%	50%	140%	90%	50%	140%	109%	50%	140%
Trichlorofluoromethane	6376676		<0.40	<0.40	NA	< 0.40	65%	50%	140%	120%	50%	140%	66%	50%	140%
Acetone	6376676		<1.0	<1.0	NA	< 1.0	60%	50%	140%	93%	50%	140%	113%	50%	140%
1,1-Dichloroethylene	6376676		<0.30	<0.30	NA	< 0.30	77%	50%	140%	94%	60%	130%	104%	50%	140%
Methylene Chloride	6376676		<0.30	<0.30	NA	< 0.30	79%	50%	140%	105%	60%	130%	93%	50%	140%
trans- 1,2-Dichloroethylene	6376676		<0.20	<0.20	NA	< 0.20	80%	50%	140%	94%	60%	130%	84%	50%	140%
Methyl tert-butyl ether	6376676		<0.20	<0.20	NA	< 0.20	81%	50%	140%	118%	60%	130%	81%	50%	140%
1,1-Dichloroethane	6376676		<0.30	<0.30	NA	< 0.30	80%	50%	140%	98%	60%	130%	99%	50%	140%
Methyl Ethyl Ketone	6376676		<1.0	<1.0	NA	< 1.0	91%	50%	140%	109%	50%	140%	86%	50%	140%
cis- 1,2-Dichloroethylene	6376676		<0.20	<0.20	NA	< 0.20	85%	50%	140%	101%	60%	130%	94%	50%	140%
Chloroform	6376676		<0.20	<0.20	NA	< 0.20	93%	50%	140%	104%	60%	130%	97%	50%	140%
1,2-Dichloroethane	6376676		<0.20	<0.20	NA	< 0.20	94%	50%	140%	107%	60%	130%	93%	50%	140%
1,1,1-Trichloroethane	6376676		<0.30	<0.30	NA	< 0.30	81%	50%	140%	86%	60%	130%	92%	50%	140%
Carbon Tetrachloride	6376676		<0.20	<0.20	NA	< 0.20	75%	50%	140%	69%	60%	130%	83%	50%	140%
Benzene	6376676		<0.20	<0.20	NA	< 0.20	88%	50%	140%	100%	60%	130%	95%	50%	140%
1,2-Dichloropropane	6376676		<0.20	<0.20	NA	< 0.20	93%	50%	140%	102%	60%	130%	90%	50%	140%
Trichloroethylene	6376676		<0.20	<0.20	NA	< 0.20	90%	50%	140%	97%	60%	130%	93%	50%	140%
Bromodichloromethane	6376676		<0.20	<0.20	NA	< 0.20	89%	50%	140%	99%	60%	130%	88%	50%	140%
Methyl Isobutyl Ketone	6376676		<1.0	<1.0	NA	< 1.0	90%	50%	140%	109%	50%	140%	90%	50%	140%

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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H228860

PROJECT: NS2484-025

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Dec 11, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,1,2-Trichloroethane	6376676		<0.20	<0.20	NA	< 0.20	111%	50%	140%	120%	60%	130%	106%	50%	140%
Toluene	6376676		<0.20	<0.20	NA	< 0.20	103%	50%	140%	109%	60%	130%	104%	50%	140%
Dibromochloromethane	6376676		<0.10	<0.10	NA	< 0.10	103%	50%	140%	113%	60%	130%	89%	50%	140%
Ethylene Dibromide	6376676		<0.10	<0.10	NA	< 0.10	94%	50%	140%	110%	60%	130%	88%	50%	140%
Tetrachloroethylene	6376676		<0.20	<0.20	NA	< 0.20	105%	50%	140%	103%	60%	130%	103%	50%	140%
1,1,1,2-Tetrachloroethane	6376676		<0.10	<0.10	NA	< 0.10	94%	50%	140%	105%	60%	130%	88%	50%	140%
Chlorobenzene	6376676		<0.10	<0.10	NA	< 0.10	108%	50%	140%	105%	60%	130%	95%	50%	140%
Ethylbenzene	6376676		<0.10	<0.10	NA	< 0.10	104%	50%	140%	102%	60%	130%	99%	50%	140%
m & p-Xylene	6376676		<0.20	<0.20	NA	< 0.20	107%	50%	140%	107%	60%	130%	105%	50%	140%
Bromoform	6376676		<0.10	<0.10	NA	< 0.10	109%	50%	140%	118%	60%	130%	105%	50%	140%
Styrene	6376676		<0.10	<0.10	NA	< 0.10	106%	50%	140%	108%	60%	130%	100%	50%	140%
1,1,2,2-Tetrachloroethane	6376676		<0.10	<0.10	NA	< 0.10	101%	50%	140%	111%	60%	130%	87%	50%	140%
o-Xylene	6376676		<0.10	<0.10	NA	< 0.10	113%	50%	140%	111%	60%	130%	107%	50%	140%
1,3-Dichlorobenzene	6376676		<0.10	<0.10	NA	< 0.10	108%	50%	140%	113%	60%	130%	103%	50%	140%
1,4-Dichlorobenzene	6376676		<0.10	<0.10	NA	< 0.10	114%	50%	140%	111%	60%	130%	99%	50%	140%
1,2-Dichlorobenzene	6376676		<0.10	<0.10	NA	< 0.10	112%	50%	140%	110%	60%	130%	98%	50%	140%
n-Hexane	6376676		<0.20	<0.20	NA	< 0.20	116%	50%	140%	91%	60%	130%	84%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)															
F1 (C6 to C10)	6376676		<25	<25	NA	< 25	84%	60%	140%	87%	60%	140%	78%	60%	140%
F2 (C10 to C16)	6380670		< 100	< 100	NA	< 100	104%	60%	140%	75%	60%	140%	89%	60%	140%
F3 (C16 to C34)	6380670		< 100	< 100	NA	< 100	114%	60%	140%	80%	60%	140%	81%	60%	140%
F4 (C34 to C50)	6380670		< 100	< 100	NA	< 100	78%	60%	140%	80%	60%	140%	77%	60%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By:

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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
AGAT WORK ORDER: 24H228860
PROJECT: NS2484-025
ATTENTION TO: Jodie Glasier
SAMPLING SITE:
SAMPLED BY:

Water Analysis

RPT Date: Dec 11, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Water)															
Dissolved Antimony	6383719		<1.0	<1.0	NA	< 1.0	103%	70%	130%	107%	80%	120%	109%	70%	130%
Dissolved Arsenic	6383719		<1.0	<1.0	NA	< 1.0	97%	70%	130%	104%	80%	120%	117%	70%	130%
Dissolved Barium	6383719		131	128	2.3%	< 2.0	98%	70%	130%	98%	80%	120%	111%	70%	130%
Dissolved Beryllium	6383719		<0.50	<0.50	NA	< 0.50	101%	70%	130%	113%	80%	120%	122%	70%	130%
Dissolved Boron	6383719		122	123	0.8%	< 10.0	99%	70%	130%	110%	80%	120%	121%	70%	130%
Dissolved Cadmium	6383719		<0.20	<0.20	NA	< 0.20	100%	70%	130%	105%	80%	120%	110%	70%	130%
Dissolved Chromium	6383719		<2.0	<2.0	NA	< 2.0	98%	70%	130%	104%	80%	120%	119%	70%	130%
Dissolved Cobalt	6383719		<0.50	<0.50	NA	< 0.50	106%	70%	130%	97%	80%	120%	112%	70%	130%
Dissolved Copper	6383719		<1.0	<1.0	NA	< 1.0	104%	70%	130%	102%	80%	120%	111%	70%	130%
Dissolved Lead	6383719		<0.50	1.29	NA	< 0.50	91%	70%	130%	95%	80%	120%	95%	70%	130%
Dissolved Molybdenum	6383719		4.02	4.15	3.2%	< 0.50	100%	70%	130%	108%	80%	120%	102%	70%	130%
Dissolved Nickel	6383719		<1.0	<1.0	NA	< 1.0	106%	70%	130%	97%	80%	120%	108%	70%	130%
Dissolved Selenium	6383719		4.7	<1.0	NA	< 1.0	99%	70%	130%	104%	80%	120%	108%	70%	130%
Dissolved Silver	6383719		<0.20	<0.20	NA	< 0.20	100%	70%	130%	90%	80%	120%	91%	70%	130%
Dissolved Thallium	6383719		<0.30	<0.30	NA	< 0.30	96%	70%	130%	107%	80%	120%	99%	70%	130%
Dissolved Uranium	6383719		0.69	0.62	NA	< 0.50	93%	70%	130%	97%	80%	120%	100%	70%	130%
Dissolved Vanadium	6383719		0.45	<0.40	NA	< 0.40	113%	70%	130%	109%	80%	120%	122%	70%	130%
Dissolved Zinc	6383719		8.5	<5.0	NA	< 5.0	100%	70%	130%	114%	80%	120%	117%	70%	130%
Mercury	6379919		<0.02	<0.02	NA	< 0.02	103%	70%	130%	105%	80%	120%	90%	70%	130%
Chromium VI	6378073		7.35	5.88	NA	< 2	104%	70%	130%	98%	80%	120%	93%	70%	130%
Cyanide, WAD	6383589	6383589	<2	<2	NA	< 2	94%	70%	130%	107%	80%	120%	98%	70%	130%
Dissolved Sodium	6383719		20400	21700	6.2%	< 50	100%	70%	130%	116%	80%	120%	105%	70%	130%
Chloride	6383767		56200	54700	2.7%	< 100	91%	70%	130%	98%	80%	120%	101%	70%	130%
Electrical Conductivity	6378073		828	826	0.2%	< 2	102%	90%	110%						
pH	6378073		7.69	7.79	1.3%	NA	100%	90%	110%						

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By:

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Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H228860

PROJECT: NS2484-025

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Napthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			N/A
F1 (C6 to C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H228860

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H228860

PROJECT: NS2484-025

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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FAX (905)712-5122
http://www.agatlabs.com

Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H228860

PROJECT: NS2484-025

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6073	modified from SM 3500-CR B	LACHAT FIA
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Dissolved Sodium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP/MS
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Electrical Conductivity	INOR-93-6000	SM 2510 B	PC TITRATE
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE

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905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: NSSL
Contact: Jade Glaser
Address: 3320 Meritville Hwy Unit 4
Thorold, ON L2V 4Y6
Phone: 289-407-6341 Fax:
Reports to be sent to:
1. Email: Jglaser@nssl.ca
2. Email:

Project Information:

Project: NS2484-02
Site Location:
Sampled By:
AGAT Quote #: 103659 EB PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 — Table 2 (Indicate One) — ☐ Ind/Com ☒ Res/Park ☐ Agriculture
Soil Texture (Check One): ☐ Coarse ☒ Fine
☐ Regulation 406 — Table (Indicate One) — ☐ Ind/Com ☐ Res/Park ☐ Agriculture
☐ Regulation 558
☐ CCME
☐ Sewer Use ☐ Sanitary ☐ Storm — Region
☐ Prov. Water Quality Objectives (PWQO)
☐ Other — Indicate One

Is this submission for a **Record of Site Condition (RSC)**? ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Legal Sample ☐

Sample Matrix Legend

GW	Ground Water	**SD**	Sediment
O	Oil	**SW**	Surface Water
P	Paint	**R**	Rock/Shale
S	Soil		

Laboratory Use Only

Work Order #: 24H228560
Cooler Quantity: 4 Coolers
Arrival Temperatures: 2.1 | 2.0 | 2.4
Depot Temperatures: 2.8 | 3.0 | 3.5
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: ICE PKS

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): 4 day Turnaround

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CSR

	Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: VOC	O. Reg 153: PAHs	O. Reg 153: PCBs: Aroclors ☐	O. Reg 406: Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	O. Reg 406: EC, SAR	O. Reg 406: Regulation 406 SPLP Rainwater Leach mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC	O. Reg 558: Landfill Disposal Characterization TCLP: TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1.	MW1	12-5	AM/PM	13	GW	All Samples	Y	X		X	X	X							
2.	MW2	↓	AM/PM	↓	↓	taken on	↓	X		X	X	X							
3.	MW3		AM/PM			Dec 5th 2024		X		X	X	X							
4.	DUP		AM/PM				↓	X		X	X	X							
5.			AM/PM																
6.			AM/PM																
7.			AM/PM																
8.			AM/PM																
9.			AM/PM																
10.			AM/PM																
11.			AM/PM																

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Damen Nyland	12-5	1:30pm	PTAIC	Dec 5/24	1:25pm
PTAIC	Dec 5/24	3pm		Dec 5	3:45pm

Page ____ of ____

N°: T-157687

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AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
3300 MERRITTVILLE HIGHWAY
THOROLD, ON L2V 4Y6
289-407-6341

ATTENTION TO: Jodie Glasier

PROJECT: NS2484-02

AGAT WORK ORDER: 25H246698

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Inorganic Team Lead

DATE REPORTED: Feb 19, 2025

PAGES (INCLUDING COVER): 5

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
- *Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.*
- *All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.*
- *This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.*
- *For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.*

AGAT Laboratories

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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 25H246698

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

DATE RECEIVED: 2025-02-11

DATE REPORTED: 2025-02-19

				SAMPLE DESCRIPTION:	MW1
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2025-02-11 12:00
Parameter	Unit	G / S	RDL	6517553	
Dissolved Cobalt	µg/L	66	0.50	23.0	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6517553 Metals analysis completed on a filtered sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Iris Verástegui

AGAT Laboratories

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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 25H246698

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

Water Analysis

RPT Date: Feb 19, 2025			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Water)															
Dissolved Cobalt	6517623		102	104	1.9%	< 0.50	91%	70%	130%	101%	80%	120%	101%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By: Iris Verástegui

AGAT Laboratories

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FAX (905)712-5122
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Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 25H246698

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS

AGAT Laboratories

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webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: NSSL
Contact: Jodie Glasier
Address: 3320 Meritville Hwy Unit 4
Thorold ON L2V 4Y6
Phone: 289-407-6341 Fax:
Reports to be sent to:
1. Email: Jglasier@nssl.ca
2. Email:

Project Information:

Project: NS2484-02
Site Location:
Sampled By:
AGAT Quote #: 29557615266EB PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 — Table 3 (Indicate One) — ☐ Ind/Com ☒ Res/Park ☐ Agriculture
Soil Texture (Check One): ☐ Coarse ☒ Fine
☐ Regulation 406 — Table (Indicate One) — ☐ Ind/Com ☐ Res/Park ☐ Agriculture
☐ Regulation 558
☐ CCME
☐ Sewer Use ☐ Sanitary ☐ Storm — Region
☐ Prov. Water Quality Objectives (PWQO)
☐ Other (Indicate One)

Is this submission for a **Record of Site Condition (RSC)?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Legal Sample ☐

Sample Matrix Legend

GW	Ground Water	SD	Sediment
O	Oil	SW	Surface Water
P	Paint	R	Rock/Shale
S	Soil		

Laboratory Use Only

Work Order #: 25H246698
Cooler Quantity: 1 small
Arrival Temperatures: 12.1 | 12.6 | 12.4
Depot Temperatures: 2.3 | 3.1 | 3.5
Custody Seal Intact: ☐ Yes ☐ No ☒ N/A
Notes: L HF

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply):
Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*
For 'Same Day' analysis, please contact your AGAT CSR

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	VOC	PAHs	PCBs: Aroclors ☐	O. Reg 406: Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	O. Reg 406: EC, SAR	O. Reg 406: Regulation 406 SPLP Rainwater Leach mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC	O. Reg 558: Landfill Disposal Characterization TCLP: TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide	Cr6+							Potentially Hazardous or High Concentration (Y/N)
1. MW1	2-11	PM	1	GW	Dist Purge	Y												X							
2.		AM PM																							
3.		AM PM																							
4.		AM PM																							
5.		AM PM																							
6.		AM PM																							
7.		AM PM																							
8.		AM PM																							
9.		AM PM																							
10.		AM PM																							
11.		AM PM																							

Samples Relinquished By (Print Name and Sign): Damien Nyland	Date: 2-11	Time: 2pm	Samples Received By (Print Name and Sign):	Date: Feb 11, 25	Time: 2pm
Samples Relinquished By (Print Name and Sign):	Date: Feb 11/25	Time: 3pm	Samples Received By (Print Name and Sign):	Date: Feb 11	Time: 4p
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:

Page 1 of 1
N°: T-164287

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FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
3300 MERRITTVILLE HIGHWAY
THOROLD, ON L2V 4Y6
289-407-6341

ATTENTION TO: Jodie Glasier

PROJECT: NS2484-02

AGAT WORK ORDER: 25H246699

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Inorganic Team Lead

DATE REPORTED: Feb 19, 2025

PAGES (INCLUDING COVER): 5

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
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- *The test results reported herewith relate only to the samples as received by the laboratory.*
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- *All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.*
- *This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.*
- *For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.*

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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 25H246699

PROJECT: NS2484-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

DATE RECEIVED: 2025-02-11 **DATE REPORTED: 2025-02-19**

		SAMPLE DESCRIPTION:		MW1
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2025-02-11
Parameter	**Unit**	**G / S**	**RDL**	**6517613**
Dissolved Cobalt	µg/L	66	0.50	29.3

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6517613 Metals analysis completed on a filtered sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Iris Verástegui

AGAT Laboratories

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MISSISSAUGA, ONTARIO
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FAX (905)712-5122
http://www.agatlabs.com

Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 25H246699

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

Water Analysis

RPT Date: Feb 19, 2025			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Water)															
Dissolved Cobalt	6517623		102	104	1.9%	< 0.50	91%	70%	130%	101%	80%	120%	101%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By: Iris Verástegui

AGAT Laboratories

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MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 25H246699

PROJECT: NS2484-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS

AGAT Laboratories

Have feedback? Scan here for a quick survey!

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Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: NSSL
Contact: Jodie Glasser
Address: 3320 Mainway Unit 4
Burlington ON L7M 4A6
Phone: 289 407-6341 Fax:
Reports to be sent to:
1. Email: jglasser@nssl.ca
2. Email:

Project Information:

Project: NS2484-02
Site Location:
Sampled By:
AGAT Quote #: 29557615266EB PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 — Table 3 (Indicate One) — ☐ Ind/Com ☒ Res/Park ☐ Agriculture
Soil Texture (Check One): ☐ Coarse ☒ Fine

☐ Regulation 406 — Table (Indicate One) — ☐ Ind/Com ☐ Res/Park ☐ Agriculture

☐ Regulation 558

☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm — Region

☐ Prov. Water Quality Objectives (PWQO)

☐ Other — Indicate One

Is this submission for a **Record of Site Condition (RSC)**? ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Legal Sample ☐

Sample Matrix Legend

GW	Ground Water	SD	Sediment
O	Oil	SW	Surface Water
P	Paint	R	Rock/Shale
S	Soil		

Laboratory Use Only

Work Order #: 25H246699
Cooler Quantity: 1 small
Arrival Temperatures: 12.1 11.3 12.4
~~Depot~~ Temperatures: 2.3 3.1 3.5
Custody Seal Intact: ☐ Yes ☐ No ☑ N/A
Notes: L I

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CSR

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	VOC	PAHs	PCBs: Aroclors ☐	O. Reg 406: Regulation 406 Characterization Package	O. Reg 406: pH, Metals, BTEX, F1-F4	O. Reg 406: EC, SAR	O. Reg 406: Regulation 406 SPLP Rainwater Leach mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ BiaP ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide	Cobalt						Potentially Hazardous or High Concentration (Y/N)
1. MW1	2-11	AM PM	1	GW	pre purge	Y													X						
2.		AM PM																							
3.		AM PM																							
4.		AM PM																							
5.		AM PM																							
6.		AM PM																							
7.		AM PM																							
8.		AM PM																							
9.		AM PM																							
10.		AM PM																							
11.		AM PM																							

Samples Relinquished By (Print Name and Sign): Donna Nyland	Date: 2-11	Time: 2pm	Samples Received By (Print Name and Sign):	Date: Feb 11, 25	Time: 2pm		
Samples Relinquished By (Print Name and Sign):	Date: Feb 11/25	Time: 3pm	Samples Received By (Print Name and Sign):	Date: Feb 11	Time: 4pm	Page ___ of ___	
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:	N: T-164288	

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

APPENDIX D

GRAIN SIZE ANALYSIS

Project No.: NT24260 November 29, 2024

Niagara Soils Solutions Ltd.
3300 Merrittville Highway, Unit 5
Thorold, Ontario
L2V 4Y6

Attention: Ms. Jodie Glasier, President

RE: Laboratory Analysis for Soil Texture Classification
Niagara Soils Solutions Ltd. Project No. NS2484-02
4336 Willick Road, Niagara Falls, Ontario

Dear Ms. Glasier:

As requested, Niagara Testing and Inspection Ltd. [NTIL] was retained to perform laboratory analysis on soil samples for soil texture classification [i.e., fine/medium or coarse grain soil determination] as defined in Ontario Regulation 153/04 [as amended].

On Monday November 25th, 2024, three [3] soil samples were delivered by Niagara Soils Solutions Ltd. to NTIL soils laboratory for 75-micron [µm] [#200] single-sieve grain size analysis. Results for the analysis are summarized in the table below.

Sample I.D.	*Percent Passing 75 µm [#200] Sieve*	*Percent Retained on 75 µm [#200] Sieve*	*Soil Texture*
BH 1-4	98.6 %	1.4 %	Fine/Medium Grained
BH 2-8	94.9 %	5.1 %	Fine/Medium Grained
BH 4-2	94.4 %	5.6 %	Fine/Medium Grained

We trust that this information is satisfactory for your purposes. Should you have any queries please do not hesitate to contact the undersigned.

Regards:

Niagara Testing and Inspection Ltd.

Prepared by:

Dwayne Neill, P.Eng.
Project Engineer

LICENSED PROFESSIONAL ENGINEER
Nov 29, 2024
D. H. NEILL
100217552
PROVINCE OF ONTARIO

Distribution:
Jodie Glasier – jglasier@nssl.ca